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AMERICAN TRUCKING TRENDS 1977-1978

American Trucking Associations, Inc.

American Trucking Trends 1977/1978

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and Statistical Services
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Washington, D.C. 20036

I am pleased to introduce the 1977-1978 edition of *American Trucking Trends*. This book, the product of many months of work by ATA's Research and Economics Division, contains a detailed statistical profile of the trucking industry in 1977 and part of 1978. It is designed to be a reference tool for anyone who is interested in trucking.

The delay in publication, which has resulted in a combined 1977-78 edition, is due to data source modifications as well as an appreciable expansion of certain sections and deletion of others. The expansion includes new items on safety, energy consumption, systems management and modal distribution. Regional data for various tables has been deleted, due to the lack of timeliness, and inherent imperfections, in its collection.

The importance of regulated motor carriers, and indeed the trucking industry as a whole, in the scheme of the nation's economy is conveyed through a review of various charts and tables appearing in *Trends*. Forecasters keep a close watch on truck tonnage results as one of the indicators used in projecting the economic outlook. Manufacturing executives are concerned about changes in the industry as trucks are the primary movers of freight from the plant to the consumer. And, labor analysts follow the fortunes of trucking as the industry represents a vast pool of labor potential for the nation's workers.

Results for 1978 indicate that 16,874 carriers reported an estimated $36.5 billion in operating revenues. This figure represents over half of the revenues of all regulated carriers of freight—railroads, airlines, water carriers and pipelines. Motor carriers travelled over 20 billion miles in 1977, transporting over 70% of the nation's manufactured products.

An updated *Trends* is especially timely in view of recent political and economic developments. With fuel and its availability being subjects of serious concern, not only to the industry but to the average American family, data are needed to analyze events. Another example of the usefulness of *Trends* data is in the area of highway taxation. Allegations that trucks don't pay enough for highway use continue and just recently the Congressional Budget Office proposed a new method of allocation which would greatly increase the costs assigned to heavy trucks. But, as the facts in this book show, trucks paid almost 40% of combined federal and state highway user taxes in 1978—more than their fair share.

The idea that trucking should be deregulated, or that ICC regulation should at least be substantially reformed, has in the last year or so become a real threat to the industry. The advocates of deregulation contend that the system is anti-competitive, creating high rates and excessive profits for carriers. The facts shown in this book put those arguments to rest. In 1977, over 95% of every dollar earned by Class I carriers went to operating expenses, leaving the remainder to cover interest, income taxes, dividends . . . and net profit. Moreover, the price of truck service has increased at a slower rate than the price of most other goods and services. The average revenue per intercity ton mile for Class I carriers of general freight rose 77% between 1967 and 1978. During the same period, the Consumer Price Index increased 95%—18 points higher. Regulation does not inflate truck rates, it holds them down.

We do believe the system can be improved. But the advocates of deregulation are on the wrong track. The solutions will be found in reasonable, deliberate reform, not in the wholesale dismantling of a regulatory system that has served this industry, and our country, so well.

B C Whitlock Jr

Bennett C. Whitlock, Jr.
President
American Trucking Associations

EARLY HISTORY

American Trucking Associations, Inc., today, is a busy, vital member of the nation's transportation community. But it wasn't always that way. It was born amid the chaos and confusion of the devastating economic depression of the 1930s.

In the beginning, there were no rules or restrictions. Before 1935, any person with enough capital to buy a truck could enter the motor carrier industry at will. Neither his financial fitness nor the need for his service was ever questioned.

Owners, free to send their trucks wherever they wanted, competed for the most lucrative routes to big consumer centers and ignored less profitable runs to smaller rural communities.

Every operator set his own rates, usually just slightly above the break-even point because of the cutthroat competition. Responsible operators were at the mercy of trucking gypsies, who would come and go by the day, but, in their short existence, undercut the rates of established companies and upset the economics of the industry.

Trucking was unstable, chaotic and in desperate need of some order. In the late 1920s and early 1930s the call came for economic regulation.

In some states, regulation had been achieved to a degree. But for regulation to be effective, it had to be on a national basis.

First, though, the industry needed self-organization, and the strength and voice which would come with it. State and local associations were formed in the early 1920s to counter railroad-urged legislation to keep truck sizes and weights low, and they blanketed the country by the '30s. While these groups met with some success locally, they didn't work together and they lacked influence in a national forum.

Then in the early 1930s, the railroads initiated a no-holds-barred war upon the trucking industry and truck owners at last realized it was time for national organization.

Not one, but two, groups were born. Ted V. Rodgers of Scranton, Pa., John W. Blood of Kansas and Jack Keeshin of Chicago formed a group of common carriers under the banner of the American Highway Freight Association. Rodgers was chosen to head the group.

At the same time, A. J. Brousseau of Mack Motor Truck Co. and Frank Schmidt an Ohio truck operator formed an organization of state affiliates called the Federated Truck Associations of America. Edward F. Loomis, brought in from the automobile group, headed the new federation.

The two organizations were put to work immediately when the truck industry, among others, was confronted with the National Industrial Recovery Act, a depression-born measure that called for all businesses to develop "a code of fair competition." The Act, approved in 1933, also called for minimum wages, maximum hours and whatever other regulations might improve the economic picture in each industry.

Leaders of the two national trucking groups met in Chicago in the spring of 1933 to write the required code for the motor carrier industry. Other meetings in other cities followed, while more than 90 separate codes were submitted by truck operators. Nothing was put on paper until the NRA demanded the industry resolve its internal differences and come up with one acceptable code, or they were told, "the government will write one for you!"

In the summer of 1933 the two groups met again in Washington, D.C. The result of that meeting was not only a code for the industry, but the merger of the two groups into a new organization: American Trucking Associations. Rogers was elected president and Blood vice president.

"The term for which it is organized is perpetual," read the certificate of incorporation of ATA.

The newly-born trucking organization submitted its code to NRA in February, 1934, and soon persuaded all "for-hire" members of the trucking industry to sign a code of fair competition governing work hours, pay, a schedule of rates and the filing of tariffs.

Rogers, who was named chairman of the National Code Authority, the ruling body of the government-ordered, industry-regulated program, rushed home to Scranton to sign up his fleet of 40 trucks and become the code's first registrant.

Although the code did not bring about as many benefits as some operators desired, it did serve to unite the industry and crystalize its views on regulation. And it paved the way for passage by Congress, in 1935, of the Motor Carrier Act, which brought the industry under the authority of the Interstate Commerce Commission. On August 9, 1935, President Roosevelt signed the Motor Carrier Act into law.

Early History

Since then, the initial structure of the organization, a confederation of state associations which have a voice in running the national group, has changed very little. Though the size of the American Trucking Associations staff has multiplied from eight persons to somewhere near 300, and the services it provides has expanded into almost all areas of business, ATA is still a federation of 51 state and district trucking associations, and 13 conferences, and is open to all classes and types of motor carriers.

The thirteen ATA conferences are:

American Movers Conference
Common Carrier Conference—Irregular Route
Contract Carrier Conference
Film, Air & Package Carriers Conference, Inc.
Heavy Specialized Carriers Conference
Local and Short Haul Carriers National Conference
Munitions Carriers Conference, Inc.
National Automobile Transporters Association
National Tank Truck Carriers, Inc.
Oilfield Haulers Conference
Private Carriers Conference, Inc.
Regular Common Carrier Conference
Steel Carriers Conference

FINANCIAL STATISTICS

Brief Facts

- Total operating revenues for the regulated motor carrier industry were an estimated $31 billion in 1977 and an estimated $36.5 billion in 1978.
- In 1978, the revenues of general freight carriers were 58.6% of the revenues of all Class I and II carriers.
- Trucks paid more than $8.8 billion, or 39.8 percent, of the combined federal and state highway-user taxes in 1977.
- Class I intercity general freight carriers had fuel costs of 8.6 cents per vehicle mile in 1977.
- The 1978 operating ratio for Class I and II carriers was 94.9.
- Total compensation, excluding fringe benefits, averaged 56.1 cents per intercity vehicle mile for Class I and II carriers.
- Total operating expenses for Class I and II carriers were 95.5 cents out of every dollar in 1977. This left only 4.5 cents from the same dollar to pay interest, income taxes and dividends.
- The average revenue per intercity ton mile for Class I common carriers of general freight rose from 7.7 cents in 1967 to 13.6 cents in 1978, an increase of 77%. Over the same period, the Consumer Price Index increased 95%.

Other Sources of Financial Statistics:

Financial & Operating Statistics
Motor Carrier Annual Report
Financial Analysis of the Motor Carrier Industry
American Trucking Associations, Inc.
1616 P Street, N.W.
Washington, D.C. 20036

MVMA Motor Vehicle Facts & Trends
Motor Vehicle Manufacturers Association
300 New Center Building
Detroit, MI 48202

Revenues and Expenses

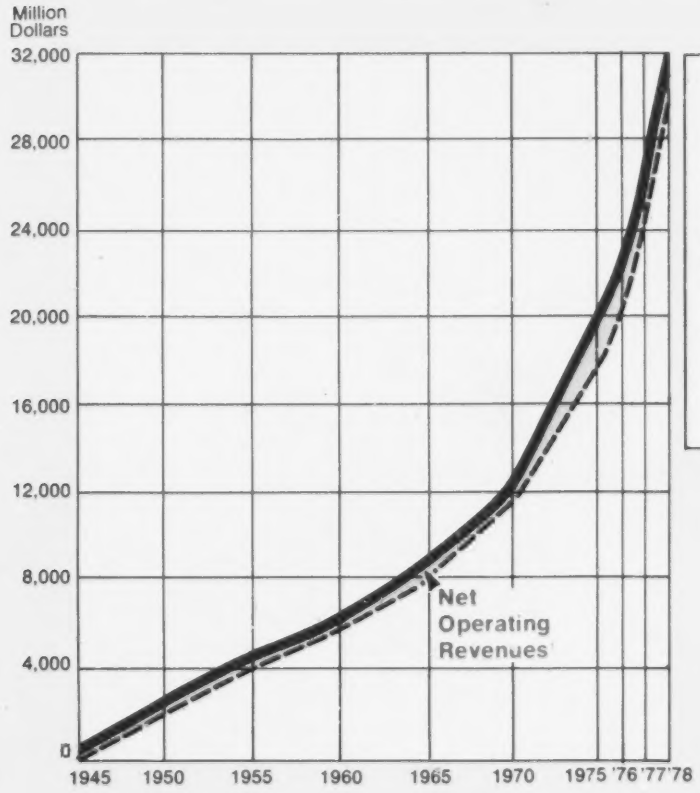
Revenues for all Federally regulated motor carriers, which include estimates for Class III carriers, are expected to increase by 17.7% in 1978 over 1977. As the chart on the opposite page indicates, motor carriers revenues represent over half of the revenues of all regulated freight carriers. Total operating revenues of all Class I, II and III motor carriers were an estimated $31 billion in 1977 and $36.5 billion in 1978.

Total operating revenues of Class I and II carriers for which detailed results are available continue to trend upwards and preliminary results indicate an amount approximating $31 billion in 1978 or a 17.7% increase over 1977 revenues of $26.2 billion.

Operating expenses are keeping pace with the revenue gains experienced by motor carriers with the level of net operating revenues remaining at a very narrow margin. In 1978, it is estimated net operating revenues will be 5.1% of total revenues or about the same level as in 1977. From these remaining dollar amounts, such expenses as income taxes and net interest charges must be deducted.

The domestic air freight industry was deregulated in November 1977 and, effective with 1978 figures, air freight revenues will no longer be totaled in the chart on "Revenue Distribution Among Regulated Freight Carriers." Domestic air passenger service is also in the process of deregulation.

Total Operating Revenues and Expenses—Million Dollars
class I and II motor carriers of property



	Total Operating Revenues	Total Operating Expenses	Number of Carriers
1945	924.6	916.7	1,894
1950	2,503.5	2,335.6	1,934
1955	4,404.2	4,226.6	2,765
1960	6,169.0	6,014.9	3,202
1965	9,034.8	8,582.9	3,673
1970	12,837.1	12,384.4	3,413
1975	19,164.7	18,342.1	2,688
1976	22,168.6	21,114.6	2,252
1977	26,240.6	24,901.0	2,464
1978	30,879.3	29,314.2	2,621

[1]Payments for net interest and income taxes are deducted from net revenue.

SOURCE: Data from *Financial & Operating Statistics*, ATA.

Revenue Distribution Among Regulated Freight Carriers[1]

(Gross Operating Revenue from Transportation of Goods)

	Railroads Class I & II		Motor Carriers Class I, II and III		Water Carriers Class A, B and Maritime in Domestic Service[2]		Pipelines (Oil)		Airways[3]		Total
	Thousands of Dollars	% Of Total	Thousands of Dollars	% Of Total	Thousands of Dollars	% of Total	Thousands of Dollars	% of Total	Thousand of Dollars	% Of Total	
1940	$ 3,686,375	75.42	$ 867,000	17.74	$ 85,394	1.75	$ 225,760	4.62	$ 23,000	0.47	$ 4,887,529
1945	6,748,528	78.65	1,406,300	16.39	74,314	0.87	304,268	3.55	47,000	0.55	8,580,410
1950	7,933,800	63.69	3,737,052	30.00	259,111	2.08	441,627	3.55	86,000	0.69	12,457,590
1955	8,665,400	56.56	5,535,200	36.14	315,300	2.06	677,600	4.42	126,000	0.82	15,319,500
1960	8,151,700	48.91	7,213,900	43.28	328,300	1.97	770,400	4.62	203,727	1.22	16,668,027
1965	9,036,500	43.64	10,068,200	48.61	307,100	1.48	903,800	4.36	396,439	1.91	20,712,039
1970	11,124,100	39.76	14,584,800	52.14	365,000	1.30	1,188,300	4.25	713,423	2.55	27,975,623
1974r	15,767,000	37.52	22,700,000	54.01	764,600	1.82	1,582,000	3.76	1,216,332	2.89	42,029,932
1975r	15,390,000	37.29	22,000,000	53.31	765,100	1.85	1,820,000	4.41	1,295,098	3.14	41,270,198
1976e	19,400,000	36.34	26,000,000	54.31	856,150	1.79	2,137,000	4.46	1,482,560	3.10	49,875,710
1977e	20,500,000	—	31,000,000	—	N/A	—	2,228,700	—	1,687,167	—	N/A
1978e	22,400,000	—	36,500,000	—	N/A	—	N/A	—	—[3.1]	—	N/A

[1]Included are revenues of Federally regulated carriers only; a major portion of the traffic handled by motor and water carriers is not subject to this regulation—for example, not reflected are the revenues or value of service generated by intrastate, local, and exempt for-hire and private motor carriers. The total value of all motor carrier services would approximately triple the 36.5 billion shown in 1978, consequently, this table does not compare the economic significance of different modes of transportation.

[2]Because of changes in various kinds of regulation, reporting requirements, and statistical publication procedures, comparison of early data with 1951 and later years is not strictly valid. Includes Class A and B inland and coastal carriers and martime carriers in domestic service including Hawaii and Alaska after 1960.

[3]Domestic service includes freight, mail, express, excess baggage, and freight charter revenues of the certificated airlines. Comparability of early data with 1950 and later years is limited because of the inclusion since that time of additional domestic air charter services. Effective January 1, 1970, in accordance with the new 50 states definition of "domestic operations," operations between 48 states and Alaska/Hawaii were reclassified as domestic. Data of 1969 and later years have been adjusted to the new definition. In November 1977, the domestic air freight industry was deregulated. As a result it will be excluded from the totals effective in 1978.

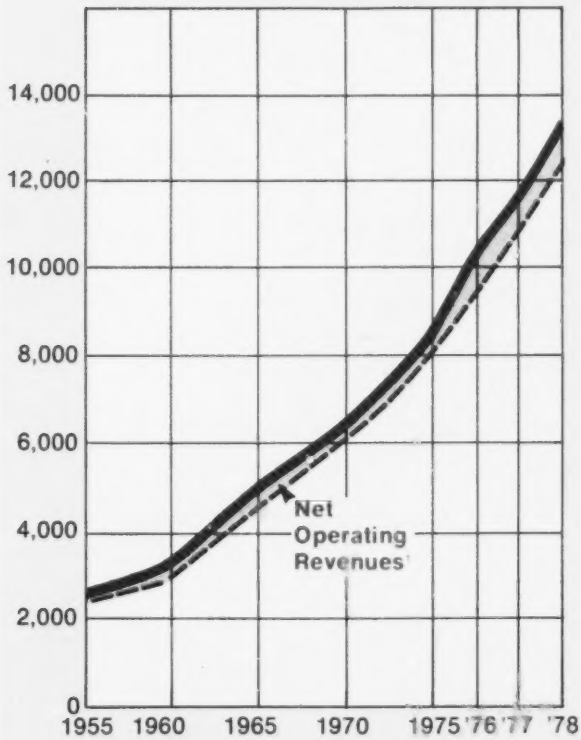
e - Estimated r - Revised N/A - Not Available

SOURCE: Interstate Commerce Commission and Air Transport Association of America. 1975 estimates assembled in part by the ATA Department of Research.

Revenues and Expenses

Revenues of Class I Intercity Common Carriers of General Freight, also termed by the ICC as Instruction 27 carriers, represent a significant portion of the total revenues of all Class I and II carriers. This group, composed of many of the largest long haul companies, form the backbone of the regulated trucking industry. They typically operate over regular routes between fixed termini and haul anything from a crate of lampshades to a box of battery parts, with some 95% of shipments being less-than-truckload (LTL).

Total Operating Revenues and Expenses—Million Dollars
class I intercity common carriers of general freight



	Total Operating Revenues ▬	Total Operating Expenses – – –	Number of Carriers
1955	2,679.4	2,583.7	1,185
1960	3,288.0	3,221.1	564
1965	4,949.7	4,682.4	624
1970	6,222.7	6,006.3	506
1975	8,580.2	8,210.6	308
1976	10,399.4	9,795.3	303
1977	11,878.1	11,175.1	284
1978	13,339.6	12,549.1	266

[1]Payments for net interest and income taxes come out of net revenue.

SOURCE: Data from Interstate Commerce Commission, *Transport Statistics in the United States*, after 1965 *Financial and Operating Statistics*, ATA.

Results of Operations

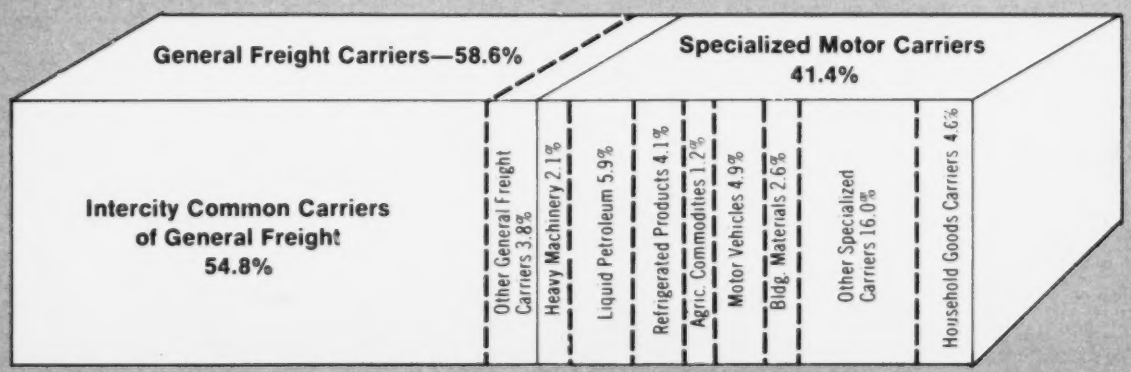
The table and block chart below contain data on Class I and II carriers who have filed completed and consistent reports in a timely manner with the ICC. Thus, the group is a somewhat small but statistically representative subtotal of the Class I and II carriers referred to on page four.

Revenues from general freight exceed revenues from specialized carriage by a margin of 17% in 1978. The "other specialized" category with total revenues of just over 4 billion in 1978 includes such commodity groups as dump trucks, armored truck service, retail store delivery service, as well as carriers of films, forest products and dangerous or hazardous materials.

Results of Operations of Class I and II Motor Carriers—1978

	Thousand Dollars	Number of Carriers
General Freight Carriers	**$14,658,958**	**678**
Intercity Common Carriers of GF	13,705,034	411
Other General Freight Carriers	953,924	267
Specialized Motor Carriers	**10,363,060**	**1,365**
Heavy Machinery	531,837	60
Liquid Petroleum	1,463,276	144
Refrigerated Products	1,026,845	118
Agricultural Products	307,284	83
Motor Vehicles	1,226,726	38
Building Materials	637,373	113
Other Specialized	4,014,418	703
Household Good Carriers	1,155,301	106
Total Revenue	**$25,022,018**	**2,043**

Distribution of Revenue by Type of Carrier—1978[1]



[1]Excludes revenues of United Parcel Services which totaled $2.8 billion.
SOURCE: *Financial & Operating Statistics*, ATA.

Operating Ratios

Operating ratio, the percentage relationship of operating expenses to gross revenues, is a significant indication of a carrier's operating efficiency. For example, an operating ratio of 94.9 percent means that operating expenses of the carriers absorbed 94.9 percent of their revenues leaving 5.1 cents of every revenue dollar to meet other expenses. These other expenses include non-operating adjustments such as deductions for net interest and income taxes.

The operating ratio is considered a key measure of industry-wide performance because it does exclude non-operating items and thus can be used for comparative evaluations. Although there are exceptions for certain carrier segments or for particularly lean years, the operating ratio generally hovers between 94.0 and 96.0.

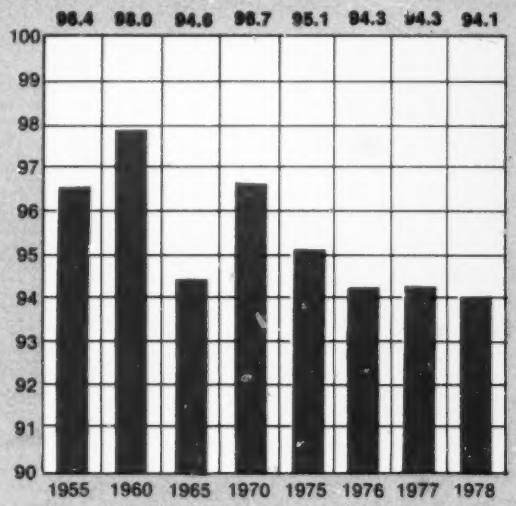
Operating Ratios:

percentage of expenses to gross revenue
all class I and II carriers

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Full Year
1945	96.7	95.8	99.3	105.1	99.2
1950	93.3	91.8	91.2	96.5	93.2
1955	94.6	94.6	95.2	98.6	95.8
1960	98.0	96.5	95.9	99.5	97.5
1965	96.3	93.7	93.3	95.8	94.7
1970	97.1	97.5	94.1	96.1	96.2
1975	98.6	95.4	93.8	94.6	95.7
1976	95.7	94.0	94.1	95.8	94.9
1977	96.5	93.8	93.9	95.4	94.9
1978	97.3	93.3	93.6	94.6	94.7

Operating Ratio

class I intercity common carriers
of general freight only

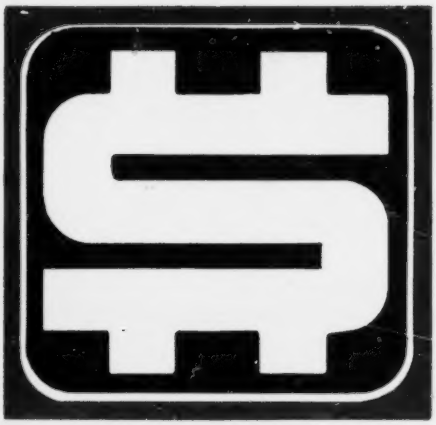


Operating Ratios:

percentage of expenses to gross revenue

All Class I and II Intercity/Local Special Commodities Carriers	1975	1976	1977	1978
Household Goods	99.2	99.3	99.5	100.4
Heavy Machinery	95.6	94.0	93.5	92.5
Liquid Petroleum Products	96.3	95.2	95.0	94.3
Refrigerated Products	95.6	95.7	96.0	96.0
Agricultural Commodities	94.9	95.9	95.7	95.3
Motor Vehicles	97.0	96.3	96.4	96.3
Building Materials	96.9	95.5	95.2	94.9
Other Specialized	96.1	95.1	94.9	94.7

SOURCE: ***Financial and Operating Statistics,*** ATA



Financial Ratios

Bankers, investors, suppliers, regulators, even the carriers themselves use financial ratios to measure and evaluate the performance of a particular trucking company in comparison with a group of similar companies. Although one ratio may be used more than another, analysts generally focus on the ones included below as an aid in determining a motor carrier's financial condition and operating performance.

These ratios, derived from balance sheet and income statement results, are particularly significant when developed into a trend over a period of years. And, an understanding of these trends may convey some awareness in regard to future prospects.

The key ratios are generally considered the operating ratio, net profit margin, return on transportation investment, return on equity and the current ratio. The other ratios shown in these tables are nonetheless important in supporting or "explaining" the primary measures.

The derivation of the ratios is shown below. Return on equity, as used here, differs markedly from the way the ICC computed it in regard to the Southern Motor Carrier Rate Conference case. The ICC calculation is Net Income After Taxes plus Deferred Taxes divided by Stockholders Equity less Intangibles and Deferred Tax Credits.

Financial Ratios 1977[1]

all class I and class II carriers

(carriers reporting)	Total All[2] Carriers (1885)	Total Class I (760)	Total Class II (1125)	Total General Freight (827)	Total Specialized (1058)
Operating Ratio, %	94.76	94.63	96.02	94.45	95.42
Net Profit Margin, %	4.76	4.85	3.79	5.11	3.99
Return on Trptn. Invest., %	12.95	12.93	13.16	13.19	12.39
Return on Equity, %	15.27	15.38	14.25	14.99	16.02
Return on Capital, %	10.66	10.74	9.94	10.85	10.23
Current Ratio	1.20	1.20	1.20	1.21	1.17
Turnover-Net Carr. Oper. Prop.	5.06	5.02	5.50	5.00	5.21
Long-term Debt to Equity	.43	.43	.43	.38	.57
Net Debt to Equity	.30	.30	.28	.25	.43
Cash Flow to Curr. Liab.	.54	.55	.45	.55	.52
Ave. Days Exp. in Work. Capital	9.85	9.66	11.62	10.37	8.70
Acct. Rec. Turnover	12.81	13.06	10.77	12.89	12.64
No. Times Int. Earned	5.58	5.90	3.18	7.19	3.26

[1]See appendix for computation of financial ratios.

[2]Excludes Household Goods Carriers.

SOURCE: *Motor Carrier Annual Report*, ATA.

class I and class II intercity common carriers of general freight[1]

(carriers reporting)	Total		Class I		Class II	
	1977 (500)	1976 (574)	1977 (306)	1976 (322)	1977 (194)	1976 (252)
Operating Ratio, %	94.35	94.43	94.29	94.34	96.25	96.54
Net Profit Margin, %	5.23	5.26	5.28	5.36	3.83	3.06
Return on Trptn. Invest., %	12.66	11.86	12.62	11.92	14.13	10.01
Return on Equity, %	13.93	12.84	13.93	12.93	14.23	10.26
Return on Capital, %	10.05	9.33	10.03	9.39	10.80	7.61
Current Ratio	1.26	1.28	1.26	1.29	1.17	1.20
Turnover-Net Carr. Oper. Prop.	4.75	4.69	4.72	4.65	6.04	5.92
Long-term Debt to Equity	.39	.38	.39	.38	.32	.35
Net Debt to Equity	.24	.22	.24	.22	.18	.19
Cash Flow to Curr. Liab.	.56	.52	.56	.52	.38	.35
Ave. Days Exp. in Work. Capital	12.97	14.66	13.07	14.78	10.15	11.99
Acct. Rec. Turnover	12.47	13.57	12.59	13.73	9.65	10.65
No. Times Int. Earned	6.21	8.06	6.25	8.21	4.70	4.92

[1]See appendix for computation of financial ratios.

SOURCE: *Motor Carrier Annual Report*, ATA.

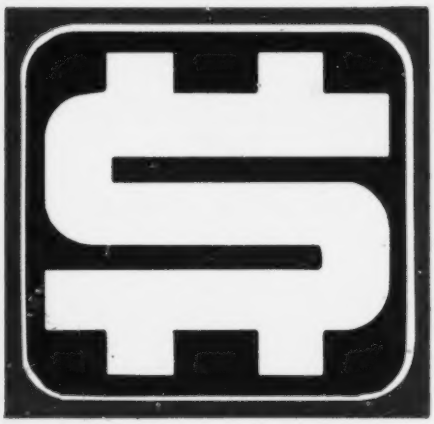
Motor Carrier Balance Sheet Results 1977/1976

(carriers represented) Thousands of Dollars	TOTAL ALL CARRIERS[1] (1885) 1977		(1992) 1976		TOTAL CLASS I (760) 1977		(764) 1976		TOTAL CLASS II (1125) 1977		(1228) 1976		TOTAL GENERAL FREIGHT (827) 1977		(898) 1976		TOTAL SPECIALIZED[1] (1058) 1977		(1094) 1976	
ASSETS																				
Current Assets																				
Cash, W.F., Spec. Dep. & T.C.I.	920,824	9.2	943,445	10.5	822,236	9.1	835,994	10.4	98,588	10.6	107,450	10.7	643,664	9.3	671,074	10.6	277,161	9.1	272,370	10.0
Receivables from Affiliates	227,263	2.2	247,563	2.7	201,951	2.2	211,949	2.6	25,312	2.7	35,613	3.5	139,180	2.0	146,214	2.3	88,083	2.9	101,348	3.7
Other Notes & Accts. Rec. Net	1,827,414	18.4	1,527,293	17.0	1,628,188	18.1	1,327,814	16.6	199,226	21.4	199,478	20.0	1,244,597	18.0	1,037,146	16.5	582,817	19.3	490,147	18.1
Prepayments	328,362	3.3	286,281	3.1	297,132	3.3	254,294	3.1	31,230	3.3	31,987	3.2	230,430	3.3	195,281	3.1	97,932	3.2	90,999	3.3
Other Current Assets	220,786	2.2	200,333	2.2	198,933	2.2	177,060	2.2	21,853	2.3	23,272	2.3	143,331	2.0	128,409	2.0	77,455	2.5	71,923	2.6
TOTAL CURRENT ASSETS	**3,524,650**	**35.5**	**3,204,915**	**35.6**	**3,148,440**	**35.0**	**2,807,112**	**35.1**	**376,210**	**40.4**	**397,802**	**39.9**	**2,401,203**	**34.7**	**2,178,125**	**34.7**	**1,123,447**	**37.2**	**1,026,789**	**37.9**
Other Assets																				
Carrier Operating Property	9,051,358	91.2	8,278,169	92.1	8,188,123	91.0	7,328,120	91.7	863,236	92.8	950,050	95.3	6,194,266	89.6	5,667,195	90.3	2,857,093	94.7	2,610,974	96.4
Depreciation & Amort.	4,427,746	44.6	4,181,525	46.5	3,954,341	43.9	3,641,724	45.6	473,406	50.9	539,801	54.1	2,984,728	43.2	2,791,639	44.4	1,443,018	47.8	1,389,885	51.3
Net Carrier Operating Property	4,623,609	46.5	4,096,646	45.6	4,233,782	47.0	3,686,397	46.1	389,827	41.9	410,249	41.1	3,209,534	46.4	2,875,557	45.8	1,414,074	46.8	1,221,089	45.0
Net Other Tangible Property	133,159	1.3	136,472	1.5	87,750	.9	89,350	1.1	45,409	4.8	47,122	4.7	68,309	.9	75,025	1.2	64,850	2.1	61,447	2.2
TOTAL TANGIBLE PROPERTY	**4,756,771**	**47.9**	**4,233,119**	**47.1**	**4,321,531**	**48.0**	**3,775,747**	**47.2**	**435,240**	**46.8**	**457,371**	**45.9**	**3,277,846**	**47.4**	**2,950,582**	**47.0**	**1,478,924**	**49.0**	**1,282,537**	**47.3**
TOTAL INTANGIBLE PROPERTY	**547,954**	**5.5**	**490,936**	**5.4**	**509,510**	**5.6**	**446,194**	**5.5**	**38,444**	**4.1**	**44,741**	**4.4**	**409,058**	**5.9**	**366,051**	**5.8**	**138,896**	**4.6**	**124,884**	**4.6**
Net Invest. & Adv. Affil. Cos.	793,191	7.9	740,056	8.2	758,445	8.4	693,515	8.6	34,746	3.7	46,540	4.6	634,396	9.1	579,833	9.2	158,795	5.2	160,222	5.9
Other Invest. & Advances	161,746	1.6	163,072	1.8	131,997	1.4	131,942	1.6	29,748	3.2	31,129	3.1	98,307	1.4	99,073	1.5	63,439	2.1	63,998	2.3
TOTAL INVEST. & ADVANCES	**969,880**	**9.7**	**914,213**	**10.1**	**904,161**	**10.0**	**835,363**	**10.4**	**65,719**	**7.0**	**78,849**	**7.9**	**740,522**	**10.7**	**684,879**	**10.9**	**229,357**	**7.6**	**229,333**	**8.4**
TOTAL DEFERRED CHARGES	**124,495**	**1.2**	**139,716**	**1.5**	**110,648**	**1.2**	**122,361**	**1.5**	**13,848**	**1.4**	**17,354**	**1.7**	**78,534**	**1.1**	**95,062**	**1.5**	**45,961**	**1.5**	**44,653**	**1.6**
TOTAL ASSETS	**9,923,750**	**100.0**	**8,982,899**	**100.0**	**8,994,291**	**100.0**	**7,986,778**	**100.0**	**929,459**	**100.0**	**996,119**	**100.0**	**6,907,164**	**100.0**	**6,274,700**	**100.0**	**3,016,586**	**100.0**	**2,708,197**	**100.0**
LIABILITIES & EQUITY																				
Current Liabilities																				
Payables to Affiliates	178,383	1.8	170,914	1.9	153,881	1.7	132,898	1.6	24,502	2.6	38,015	3.8	84,289	1.2	80,096	1.2	94,094	3.1	90,817	3.3
Other Notes & Accts. Payable	1,082,310	10.9	963,046	10.7	924,987	10.2	799,317	10.0	157,323	16.9	163,729	16.4	689,789	9.9	615,314	9.8	392,521	13.0	347,732	12.8
Salaries & Wages Payable	222,683	2.2	192,117	2.1	204,455	2.2	172,345	2.1	18,229	1.9	19,771	1.9	172,798	2.5	145,488	2.3	49,886	1.6	46,628	1.7
Accrued Taxes	244,793	2.4	231,641	2.5	227,533	2.5	212,744	2.6	17,259	1.8	18,896	1.9	184,248	2.6	166,162	2.6	60,544	2.0	65,478	2.4
Curr. Equ. Obl. & Other Debt	374,296	3.7	308,512	3.4	318,682	3.5	305,704	3.8	55,614	5.9	2,808	.2	165,718	2.4	160,277	2.5	208,578	6.9	148,235	5.4
Other Current Liabilities	844,546	8.5	722,579	8.0	804,583	8.9	631,232	7.9	39,964	4.3	91,346	9.1	688,327	9.9	563,425	8.9	156,219	5.1	159,153	5.8
TOTAL CURRENT LIABILITIES	**2,947,011**	**29.7**	**2,588,811**	**28.8**	**2,634,121**	**29.2**	**2,254,242**	**28.2**	**312,890**	**33.6**	**334,568**	**33.5**	**1,985,170**	**28.7**	**1,730,764**	**27.5**	**961,841**	**31.8**	**858,047**	**31.6**
Other Liabilities																				
Advances Payable-Affiliates	258,075	2.6	271,662	3.0	243,462	2.7	250,162	3.1	14,613	1.5	21,499	2.1	190,788	2.7	216,013	3.4	67,287	2.2	55,648	2.0
Net Equ. Obl. & Other LT Debt	1,512,774	15.2	1,318,178	14.6	1,358,333	15.1	1,170,473	14.6	154,441	16.6	147,704	14.8	912,794	13.2	832,902	13.2	599,979	19.8	485,275	17.9
TOTAL LONG TERM DEBT	**1,906,556**	**19.2**	**1,688,018**	**18.7**	**1,724,966**	**19.1**	**1,502,424**	**18.8**	**181,590**	**19.5**	**185,593**	**18.6**	**1,216,331**	**17.6**	**1,131,162**	**18.0**	**690,225**	**22.8**	**556,855**	**20.5**
Accum. Def. Income Tax Cred.	497,163	5.0	454,828	5.0	485,739	5.4	440,689	5.5	11,424	1.2	14,138	1.4	393,743	5.7	359,665	5.7	103,420	3.4	95,162	3.5
TOTAL DEFERRED CREDITS	**607,238**	**6.1**	**529,387**	**5.8**	**591,426**	**6.5**	**510,602**	**6.3**	**15,812**	**1.7**	**18,784**	**1.8**	**474,759**	**6.8**	**408,226**	**6.5**	**132,478**	**4.3**	**121,160**	**4.4**
ESTIMATED LIABILITIES	**52,358**	**.5**	**46,124**	**.5**	**51,594**	**.5**	**44,082**	**.5**	**764**		**2,041**	**.2**	**39,556**	**.5**	**34,720**	**.5**	**12,801**	**.4**	**11,403**	**.4**
Equity																				
Capital Stock	373,965	3.7	392,222	4.3	310,027	3.4	317,272	3.9	63,938	6.8	74,949	7.5	244,911	3.5	257,081	4.1	129,054	4.2	135,140	4.9
Capital Surplus	502,778	5.0	498,440	5.5	483,323	5.3	474,459	5.9	19,455	2.0	23,981	2.4	398,893	5.7	413,733	6.5	103,885	3.4	84,707	3.1
Retained Earnings	3,599,201	36.2	3,288,637	36.6	3,255,952	36.2	2,929,570	36.6	343,249	36.9	359,067	36.0	2,600,643	37.6	2,338,904	37.2	998,558	33.1	949,733	35.0
TOTAL STOCKHOLDER'S EQUITY	**4,392,815**	**44.2**	**4,110,328**	**45.7**	**3,993,183**	**44.2**	**3,670,321**	**45.9**	**409,632**	**44.0**	**440,007**	**44.1**	**3,186,995**	**46.1**	**2,964,201**	**47.2**	**1,205,820**	**39.9**	**1,146,127**	**42.3**
SOLE PROP/PARTNER EQUITY	**17,773**	**.1**	**20,229**	**.2**	**9,001**	**.1**	**5,106**		**8,772**	**.9**	**15,123**	**1.5**	**4,352**		**5,626**		**13,421**	**.4**	**14,603**	**.5**
TOTAL LIABILITIES & EQUITY	**9,923,750**	**100.0**	**8,982,899**	**100.0**	**8,994,291**	**100.0**	**7,986,778**	**100.0**	**929,459**	**100.0**	**996,119**	**100.0**	**6,907,164**	**100.0**	**6,274,700**	**100.0**	**3,016,586**	**100.0**	**2,708,197**	**100.0**

[1]Excludes Household Goods Carriers.

SOURCE: *Motor Carrier Annual Report*, ATA.

Note: Numbers may not add due to rounding.



Balance Sheet

The balance sheet presents one part of the record of the financial performance of a business with the companion part being the income statement.

Comparative balance sheets are particularly helpful to analysts in order to discern line item changes. Have current assets increased? What changes have occurred in net working capital (current assets minus current liabilities)? What is the relationship of funded debt to equity and what has happened to these ratios between the two years?

The motor carrier financial position as determined through the balance sheet, can also be ascertained relative to other industries or businesses in terms of capital structure, debt structure, current needs, and so forth.

Motor Carrier Balance Sheet Results 1977/1976

class I and II intercity common carriers of general freight

(carriers represented) Thousands of Dollars	TOTAL (500) 1977		TOTAL (574) 1976		CLASS I (306) 1977		CLASS I (322) 1976		CLASS II (194) 1977		CLASS II (252) 1976	
ASSETS												
Current Assets												
Cash, W.F., Spec. Dep. & T.C.I.	548,230	9.3	620,639	11.6	526,907	9.2	593,170	11.5	21,322	12.9	27,469	13.8
Receivables from Affiliates	98,701	1.6	111,818	2.0	95,903	1.6	105,762	2.0	2,798	1.6	6,056	3.0
Other Notes & Accts. Rec.-Net	1,015,598	17.3	822,704	15.3	974,115	17.1	778,609	15.1	41,483	25.0	44,095	22.2
Prepayments	207,709	3.5	174,831	3.2	202,692	3.5	168,563	3.2	5,017	3.0	6,268	3.1
Other Current Assets	124,377	2.1	113,145	2.1	121,901	2.1	110,177	2.1	2,476	1.5	2,968	1.4
TOTAL CURRENT ASSETS	**1,994,615**	**34.0**	**1,843,139**	**34.4**	**1,921,518**	**33.7**	**1,756,282**	**34.1**	**73,097**	**44.2**	**86,857**	**43.7**
Other Assets												
Carrier Operating Property	5,020,109	85.6	4,622,220	86.4	4,861,439	85.3	4,429,050	86.0	158,669	95.9	193,170	97.2
Depreciation & Amort.	2,354,992	40.1	2,241,727	41.9	2,262,581	39.7	2,127,842	41.3	92,410	55.8	113,885	57.3
Net Carrier Operating Property	2,665,117	45.4	2,380,493	44.5	2,598,858	45.6	2,301,207	44.7	66,259	40.0	79,285	39.9
Net Other Tangible Property	49,306	.8	50,179	.9	47,811	.8	48,178	.9	1,495	.9	2,001	1.0
TOTAL TANGIBLE PROPERTY	**2,714,424**	**46.3**	**2,430,672**	**45.4**	**2,646,669**	**46.4**	**2,349,386**	**45.6**	**67,754**	**40.9**	**81,286**	**40.9**
TOTAL INTANGIBLE PROPERTY	**390,489**	**6.6**	**348,736**	**6.5**	**380,666**	**6.6**	**337,563**	**6.5**	**9,823**	**5.9**	**11,173**	**5.6**
Net Invest. & Adv.-Affil. Cos.	591,571	10.1	539,503	10.0	585,955	10.2	531,939	10.3	5,617	3.4	7,563	3.8
Other Invest. & Advances	89,483	1.5	90,280	1.6	83,110	1.4	82,420	1.6	6,373	3.8	7,860	3.9
TOTAL INVEST. & ADVANCES	**688,585**	**11.7**	**635,142**	**11.8**	**676,297**	**11.8**	**619,341**	**12.0**	**12,287**	**7.4**	**15,800**	**7.9**
TOTAL DEFERRED CHARGES	**71,008**	**1.2**	**87,258**	**1.6**	**68,634**	**1.2**	**83,752**	**1.6**	**2,374**	**1.4**	**3,505**	**1.7**
TOTAL ASSETS	**5,859,120**	**100.0**	**5,344,949**	**100.0**	**5,693,785**	**100.0**	**5,146,326**	**100.0**	**165,336**	**100.0**	**198,623**	**100.0**
LIABILITIES & EQUITY												
Current Liabilities												
Payables to Affiliates	68,327	1.1	60,049	1.1	65,252	1.1	55,142	1.0	3,075	1.8	4,906	2.4
Other Notes & Accts. Payable	573,849	9.7	512,059	9.5	539,224	9.4	474,197	9.2	34,625	20.9	37,861	19.0
Salaries & Wages Payable	137,349	2.3	118,911	2.2	133,308	2.3	114,127	2.2	4,041	2.4	4,784	2.4
Accrued Taxes	130,584	2.2	153,627	2.8	127,685	2.2	149,280	2.9	2,899	1.7	4,346	2.1
Curr. Equ. Obl. & Other Debt	145,528	2.4	151,467	2.8	138,411	2.4	151,227	2.9	7,117	4.3	239	.1
Other Current Liabilities	529,013	9.0	439,414	8.2	518,049	9.1	419,078	8.1	10,964	6.6	20,335	10.2
TOTAL CURRENT LIABILITIES	**1,584,650**	**27.0**	**1,435,530**	**26.8**	**1,521,929**	**26.7**	**1,363,055**	**26.4**	**62,721**	**37.9**	**72,474**	**36.4**
Other Liabilities												
Advances Payable-Affiliates	122,052	2.0	113,705	2.1	120,119	2.1	111,226	2.1	1,932	1.1	2,479	1.2
Net Equ. Obl. & Other LT Debt	846,664	14.4	778,790	14.5	827,868	14.5	755,550	14.6	18,796	11.3	23,240	11.7
TOTAL LONG TERM DEBT	**1,078,643**	**18.4**	**970,354**	**18.1**	**1,054,456**	**18.5**	**938,498**	**18.2**	**24,187**	**14.6**	**31,855**	**16.0**
Accum. Def. Income Tax Cred.	310,482	5.3	286,091	5.3	308,639	5.4	284,182	5.5	1,843	1.1	1,908	.9
TOTAL DEFERRED CREDITS	**364,814**	**6.2**	**332,988**	**6.2**	**362,529**	**6.3**	**330,336**	**6.4**	**2,285**	**1.3**	**2,651**	**1.3**
ESTIMATED LIABILITIES	**38,011**	**.6**	**30,567**	**.5**	**37,915**	**.6**	**30,306**	**.5**	**96**		**260**	**.1**
Equity												
Capital Stock	210,491	3.5	223,284	4.1	197,405	3.4	207,706	4.0	13,086	7.9	15,577	7.8
Capital Surplus	389,271	6.6	403,989	7.5	386,142	6.7	394,936	7.6	3,130	1.8	9,053	4.5
Retained Earnings	2,243,220	38.2	1,986,198	37.1	2,181,060	38.3	1,918,660	37.2	62,160	37.6	67,538	34.0
TOTAL STOCKHOLDER'S EQUITY	**2,789,723**	**47.6**	**2,571,686**	**48.1**	**2,715,749**	**47.7**	**2,482,881**	**48.2**	**73,974**	**44.7**	**88,804**	**44.7**
SOLE PROP. PARTNER EQUITY	**3,279**		**3,823**		**1,207**		**1,246**		**2,072**	**1.2**	**2,576**	**1.3**
TOTAL LIABILITIES & EQUITY	**5,859,120**	**100.0**	**5,344,949**	**100.0**	**5,693,785**	**100.0**	**5,146,326**	**100.0**	**165,336**	**100.0**	**198,623**	**100.0**

SOURCE: ***Motor Carrier Annual Report,*** **ATA.**

Note: Numbers may not add due to rounding.

Average Revenues

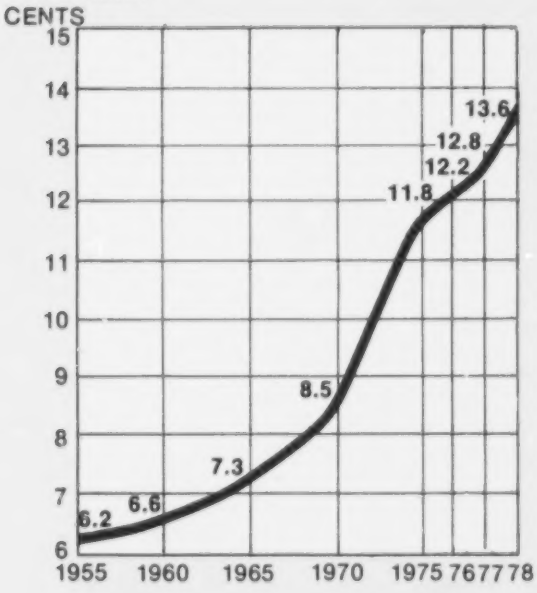
While clearly motor carrier revenues have risen through the years, caution is advised in making revenue derivative comparisons due to the ICC reclassification of Class I carriers in 1974. The effect of these changes is illustrated in the Average Revenue per Power Unit graph, broken to emphasize the lack of data comparability.

The average revenue per intercity ton mile for Class I common carriers of general freight was 13.6 cents in 1978, in comparison with 12.8 cents in 1977 and 8.5 cents in 1970.

The average revenue per power unit has continued to increase over time. The break in the Average Revenue per Power Unit graph does not indicate a downtrend between 1975 and 1976; it simply indicates that different figures for power units were used in 1976 and 1977 compared to the earlier periods. Power unit data similar to that in 1976 and 1977 is not available for prior years.

Average Revenue Per Ton-Mile

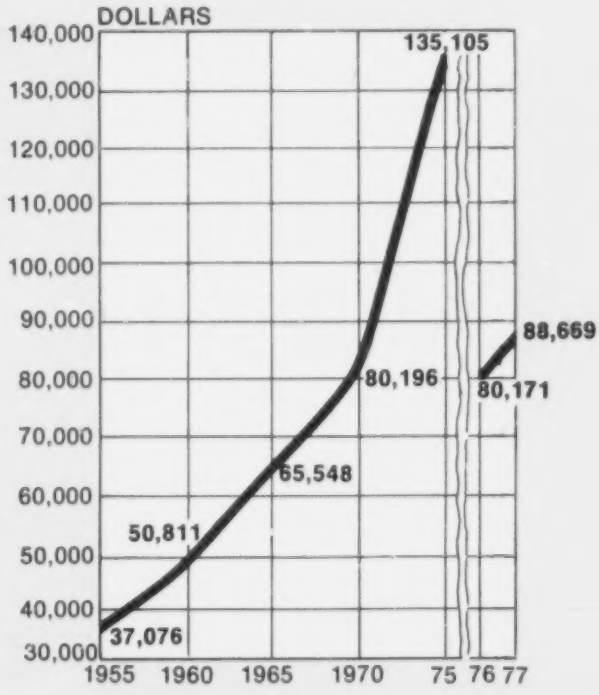
class I intercity common carriers of general freight, after 1970 class I and II carriers.



SOURCE: Data from Interstate Commerce Commission, *Transport Statistics in the United States*, after 1955 *Financial and Operating Statistics*, ATA.

Average Revenue Per Power Unit

class I intercity common carriers of general freight



SOURCE: Data from Interstate Commerce Commission, *Transport Statistics in the United States*, after 1975 *Motor Carriers Annual Report*, ATA.

Average Revenue

class I intercity common carriers of general freight

$0.64	0.79	0.91	0.94	0.97	1.01	1.08	1.17	1.33	1.40	1.53	1.68	1.65	1.76
$18.19	22.82	24.42	25.01	26.39	27.55	29.46	32.87	39.25	40.73	47.88	54.94	54.65	59.54

Average Hourly Gross Earnings

This table compares the gross average hourly earnings for non supervisory trucking and trucking terminal employees with that of all manufacturing employees. Gross rather than average hourly earnings are used because the Bureau of Labor Statistics conversion formula designed to eliminate overtime earnings is not applicable to nonmanufacturing industries. A previous table contained in this publication—which compared annual trucking wages to those of other industries—became inconsistent due to numerous definitional changes and is no longer shown. However, trends in yearly earnings can be assessed from numerous statistical publications, among them the Commerce Department's *Survey of Current Business*.

Trend In Gross Hourly Earnings

	Trucking and Trucking Terminals	All Manufacturing
YEAR	HOURLY EARNINGS	HOURLY EARNINGS
1964	$3.02	$2.53
1965	3.13	2.61
1966	3.22	2.72
1967	3.29	2.83
1968	3.48	3.01
1969	3.69	3.19
1970	3.91	3.36
1971	4.43	3.57
1972	4.92	3.81
1973	5.39	4.07
1974	5.79	4.40
1975	6.19	4.81
1976	6.57	5.19
1977	7.08	5.63
1978[1]	7.79	6.19

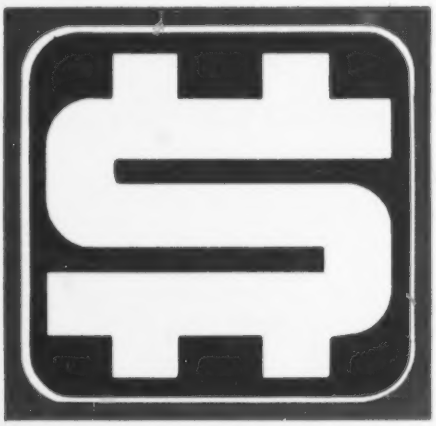
[1]American Trucking Associations, Inc. estimate.
SOURCE: Bureau of Labor Statistics.

Motor Carrier Expense Analysis 1977

all class I and II carriers

	TOTAL ALL CARRIERS		TOTAL CLASS I		TOTAL CLASS II		TOTAL GENERAL FREIGHT		TOTAL SPECIALIZED	
	Avg. Exp. per intercity veh. mile (¢)	Avg. Exp. per intercity ton ($)	Avg. Exp. per intercity veh. mile (¢)	Avg. Exp. per intercity ton ($)	Avg. Exp. per intercity veh. mile (¢)	Avg. Exp. per intercity ton ($)	Avg. Exp. per intercity veh. mile (¢)	Avg. Exp. per intercity ton ($)	Avg. Exp. per intercity veh. mile (¢)	Avg. Exp. per intercity ton ($)
OPERATING EXPENSES										
SALARIES-OFF & SUPERVISORS	**10.1¢**	**$ 2.23**	**10.4¢**	**$ 2.54**	**7.2¢**	**$ 0.93**	**15.8¢**	**$ 4.94**	**4.1¢**	**$ 0.69**
SAL. & WAGES & MISC. PD TIME OFF	**56.1**	**12.42**	**58.6**	**14.29**	**36.1**	**4.67**	**87.2**	**27.61**	**23.8**	**4.05**
Drivers & Helpers	34.4	7.62	35.5	3.32	25.7	3.32	51.7	16.12	16.5	2.81
Owner-Operator Drivers	1.8	0.39	1.8	0.45	1.2	0.15	0.2	0.56	1.8	0.30
Vehicle Repair & Service	3.8	0.85	3.9	0.96	3.0	0.38	5.3	1.66	2.3	0.39
Clerical & Administrative	5.0	1.12	5.3	1.28	3.3	0.43	8.2	2.57	1.7	0.29
(TOTAL SALARIES & WAGES)	**5.2**	**11.41**	**53.7**	**13.09**	**34.2**	**4.43**	**79.5**	**24.82**	**22.4**	**3.82**
(TOTAL MISC. PAID TIME-OFF)	**4.6**	**1.01**	**4.9**	**1.20**	**1.8**	**0.24**	**7.7**	**2.40**	**1.4**	**0.23**
Workman's Compensation	1.7	0.37	1.7	0.42	1.4	0.18	2.3	0.73	1.0	0.17
TOTAL FRINGES	**13.2**	**2.91**	**13.8**	**3.35**	**8.4**	**1.09**	**20.5**	**6.39**	**5.6**	**0.95**
Fuel-Motor Vehicles	7.0	1.55	7.0	1.71	6.9	0.89	9.0	2.79	5.0	0.85
Oil, Lubric. & Coolants	0.2	0.05	0.2	0.06	0.2	0.02	0.3	0.09	0.2	0.03
Vehicle Parts	3.1	0.68	2.9	0.71	4.4	0.57	3.6	1.13	2.5	0.43
Vehicle Maint/Outside Rep.	1.9	0.43	2.1	0.50	1.1	0.14	2.5	0.78	1.4	0.23
Tires & Tubes	2.3	0.51	2.3	0.56	2.4	0.31	2.6	0.82	2.0	0.33
TOTAL OPERATING SUPP. & EXP.	**17.0**	**3.76**	**17.0**	**4.15**	**16.7**	**2.16**	**21.1**	**6.58**	**12.7**	**2.17**
TOTAL GENERAL SUPP. & EXP.	**4.8**	**1.05**	**4.9**	**1.19**	**3.7**	**0.47**	**6.7**	**2.08**	**2.8**	**0.47**
Gas/Diesel/Oil Tax-St. & Fed.	2.1	0.47	2.1	0.52	1.8	0.24	2.8	0.87	1.4	0.24
Veh. Lic. & Reg. Fees-St. & Fed.	1.8	0.40	1.8	0.44	1.7	0.22	2.2	0.68	0.1	0.24
TOTAL OPER TAX & LICENSE	**4.5**	**0.99**	**4.5**	**1.10**	**4.0**	**0.52**	**5.8**	**1.82**	**3.1**	**0.52**
PL & PD	1.7	0.37	1.6	0.40	2.7	0.35	1.6	0.51	1.8	0.32
Cargo Loss & Damage	1.9	0.41	2.0	0.48	0.9	0.12	2.6	0.82	1.1	0.18
Fire, Theft & Collision	0.3	0.05	0.2	0.05	0.6	0.07	0.2	0.07	0.3	0.05
TOTAL INSURANCE	**4.0**	**0.88**	**3.9**	**0.96**	**4.4**	**0.57**	**4.6**	**1.45**	**3.3**	**0.56**
Communication	1.4	0.31	1.5	0.37	0.7	0.09	2.0	0.06	0.9	0.15
TOTAL COMMUN. & UTILITIES	**2.1**	**0.47**	**2.2**	**0.53**	**1.5**	**0.19**	**3.0**	**0.92**	**1.2**	**0.21**
Deprec.-Rev. Equip.	4.5	1.00	4.6	1.12	3.9	0.51	5.6	1.76	3.4	0.57
TOTAL DEPREC & AMORT	**5.5**	**1.21**	**5.6**	**1.36**	**4.6**	**0.60**	**7.1**	**2.21**	**3.8**	**0.65**
Vehicle Rents with Driver	15.1	3.34	14.4	3.51	20.6	2.67	7.2	2.24	23.3	3.97
Vehicle Rents w/o Driver	6.7	1.49	6.8	1.65	6.3	0.82	6.3	1.97	7.2	1.22
Purch Trptn-Other Carriers	3.1	0.68	3.1	0.75	3.2	0.41	4.7	1.47	1.4	0.24
REV EQUIP RENTS/PUR TRPTN	**24.4**	**5.40**	**23.7**	**5.77**	**29.6**	**3.84**	**17.5**	**5.46**	**31.5**	**5.36**
BLDG & OFFICE EQUIP RENTS	**1.7**	**0.37**	**1.7**	**0.42**	**1.3**	**0.16**	**2.7**	**0.83**	**0.7**	**0.11**
DISP OF OPER ASSETS-NET	**(0.5)**	**(0.11)**	**(0.5)**	**(0.12)**	**(0.6)**	**(0.08)**	**(0.6)**	**(0.18)**	**(0.5)**	**(0.08)**
MISCELLANEOUS EXPENSES	**0.9**	**0.19**	**0.9**	**0.21**	**0.9**	**0.11**	**1.1**	**0.33**	**0.7**	**0.11**
TOTAL OPERATING EXPENSES	**143.5**	**31.78**	**146.8**	**35.75**	**117.8**	**15.24**	**192.4**	**60.05**	**92.7**	**15.78**
TOTAL OPERATING REVENUE	**151.4**	**33.54**	**155.1**	**37.79**	**122.7**	**15.88**	**203.4**	**63.59**	**97.1**	**16.54**

SOURCE: ***Motor Carrier Annual Report,*** **ATA.**



Expense Analysis

Expense analysis is a vital aspect to better management in the trucking business. In an industry characterized by low profit margins, with a typical return on the revenue dollar of only 3 cents, even a fraction of a cent savings can greatly impact earnings.

Expenses for salaries and salary related items typically absorb over 60% of a carrier's revenues and in 1977 total compensation excluding fringe benefits averaged 56.1 cents per intercity vehicle mile for Class I and II carriers. Total fringes were another 13.2 cents and revenue equipment rents—purchased transportation were 24.4 cents. Other expenses to be noted are fuel (excluding taxes and licenses) at 7.0 cents per intercity vehicle mile and insurance at 4.0 cents.

Caution must be exercised in making expense analysis comparisons with years prior to 1974 due to ICC accounting changes. Also note in these comparisons of expenses per mile or per ton that total expenses are being compared to intercity mileage or tonnage. There is no clean break of intercity expenses from non-intercity expenses and, basically, all expenses and expense categories of intercity trucking companies are supportive of the primary function of these companies—the performance of intercity line haul movements.

Motor Carrier Expense Analysis 1977

class I and class II intercity common carriers of general freight

	TOTAL		CLASS I		CLASS II	
	Avg. Exp. per intercity vehicle mile cents	Avg. Exp. per intercity ton dollars	Avg. Exp. per intercity vehicle mile cents	Avg. Exp. per intercity ton dollars	Avg. Exp. per intercity vehicle mile cents	Avg. Exp. per intercity ton dollars
OPERATING EXPENSES						
SALARIES-OFF. & SUPERVISORS	**13.6¢**	**$ 4.45**	**13.5¢**	**$4.57**	**16.5¢**	**$ 2.48**
SAL. & WAGES & MISC. PD TIME-OFF	**75.5**	**24.69**	**75.3**	**25.48**	**83.3**	**12.50**
Drivers & Helpers	44.4	14.50	44.0	14.90	55.8	8.38
Owner-Operator Drivers	1.9	0.63	10.0	0.66	0.7	0.11
Vehicle Repair & Service	4.6	1.50	4.6	1.55	4.6	0.69
Clerical & Administrative	7.1	2.33	0.7	2.39	9.6	1.44
(TOTAL SALARIES & WAGES)	**69.0**	**22.54**	**68.7**	**23.24**	**77.5**	**11.63**
(TOTAL MISC. PAID TIME-OFF)	**6.6**	**2.15**	**0.7**	**2.23**	**5.8**	**0.87**
Workman's Compensation	2.1	0.68	2.1	0.70	2.7	0.40
TOTAL FRINGES*	**17.9**	**5.87**	**17.9**	**6.05**	**20.4**	**3.06**
Fuel-Motor Vehicles	8.6	2.82	8.6	2.92	9.0	1.34
Oil, Lubric. & Coolants	0.3	0.09	0.3	0.09	0.2	0.03
Vehicle Parts	3.2	1.05	3.1	1.06	5.9	0.89
Vehicle Maint./Outside Rep.	2.3	0.74	2.3	0.78	1.3	0.19
Tires & Tubes	2.5	0.81	2.5	0.83	2.8	0.43
TOTAL OPERATING SUPP. & EXP.	**19.5**	**6.37**	**19.4**	**6.58**	**21.6**	**3.25**
TOTAL GENERAL SUPP. & EXP.	**6.2**	**2.02**	**6.1**	**2.07**	**8.1**	**1.21**
Gas/Diesel/Oil Tax-St. & Fed.	2.7	0.88	2.7	0.91	2.7	0.40
Veh. Lic. & Reg. Fees-St. & Fed.	2.1	0.69	2.1	0.71	2.5	0.37
TOTAL OPER. TAX & LICENSE	**5.6**	**1.83**	**5.6**	**1.89**	**6.1**	**0.91**
PL & PD	1.4	0.47	1.4	0.47	3.4	0.51
Cargo Loss & Damage	2.2	0.74	0.2	0.76	2.1	0.32
Fire, Theft & Collision	0.2	0.07	0.2	0.07	0.7	0.11
TOTAL INSURANCE	**4.1**	**1.33**	**4.0**	**1.35**	**6.7**	**1.00**
Communication	1.8	0.59	1.8	0.61	1.2	0.18
TOTAL COMMUN. & UTILITIES	**2.6**	**0.85**	**2.6**	**0.88**	**3.1**	**0.46**
Deprec.-Rev. Equip.	5.2	1.70	5.2	1.75	5.3	0.80
TOTAL DEPREC. & AMORT.	**6.4**	**2.10**	**0.6**	**2.17**	**6.7**	**1.01**
Vehicle Rents with Driver	5.9	1.93	5.8	1.97	9.4	1.40
Vehicle Rents w/o Driver	6.1	2.01	6.1	2.07	6.8	1.01
Purch. Trptn.-Other Carriers	3.0	0.98	3.0	1.00	4.3	0.65
REV. EQUIP. RENTS/PUR. TRPTN.	**14.6**	**4.77**	**14.4**	**0.49**	**19.9**	**2.98**
BLDG. & OFFICE EQUIP. RENTS	**2.1**	**0.69**	**2.1**	**0.70**	**2.9**	**0.44**
DISP. OF OPER. ASSETS-NET	**(0.6)**	**(0.19)**	**(0.6)**	**(0.20)**	**(0.5)**	**(0.75)**
MISCELLANEOUS EXPENSES	**0.9**	**0.30**	**0.9**	**0.30**	**1.1**	**0.17**
TOTAL OPERATING EXPENSES	**168.5**	**55.07**	**167.7**	**56.71**	**195.9**	**29.40**
TOTAL OPERATING REVENUES	**178.6**	**58.37**	**177.8**	**60.16**	**203.6**	**30.55**

SOURCE: *Motor Carrier Annual Report*, ATA.

Motor Carrier Revenues and Expenses 1950-1977

(only carriers with more than $1 million in Annual Revenues, after 1975 $3 million and over)

per intercity vehicle mile–in cents	1950	1955	1960	1965[3]	1970	1971	1972	1973	1974	1975	1976	1977
Average Total Operating Expenses[1]	56.1¢	67.9	79.1	88.5	119.8	125.7	132.0	139.1	154.4	168.5	177.7	168.5
Average Revenue[2]	60.9¢	70.9	81.5	93.5	124.0	134.4	140.5	146.8	163.0	177.0	187.0	178.6
per intercity ton—in dollars												
Average Total Operating Expenses[1]	$12.76	17.71	23.85	23.63	33.60	36.69	38.89	40.62	44.24	51.27	58.05	55.07
Average Revenue[2]	$13.85	18.50	24.55	24.98	34.76	39.25	41.39	42.88	46.71	53.83	61.09	58.37

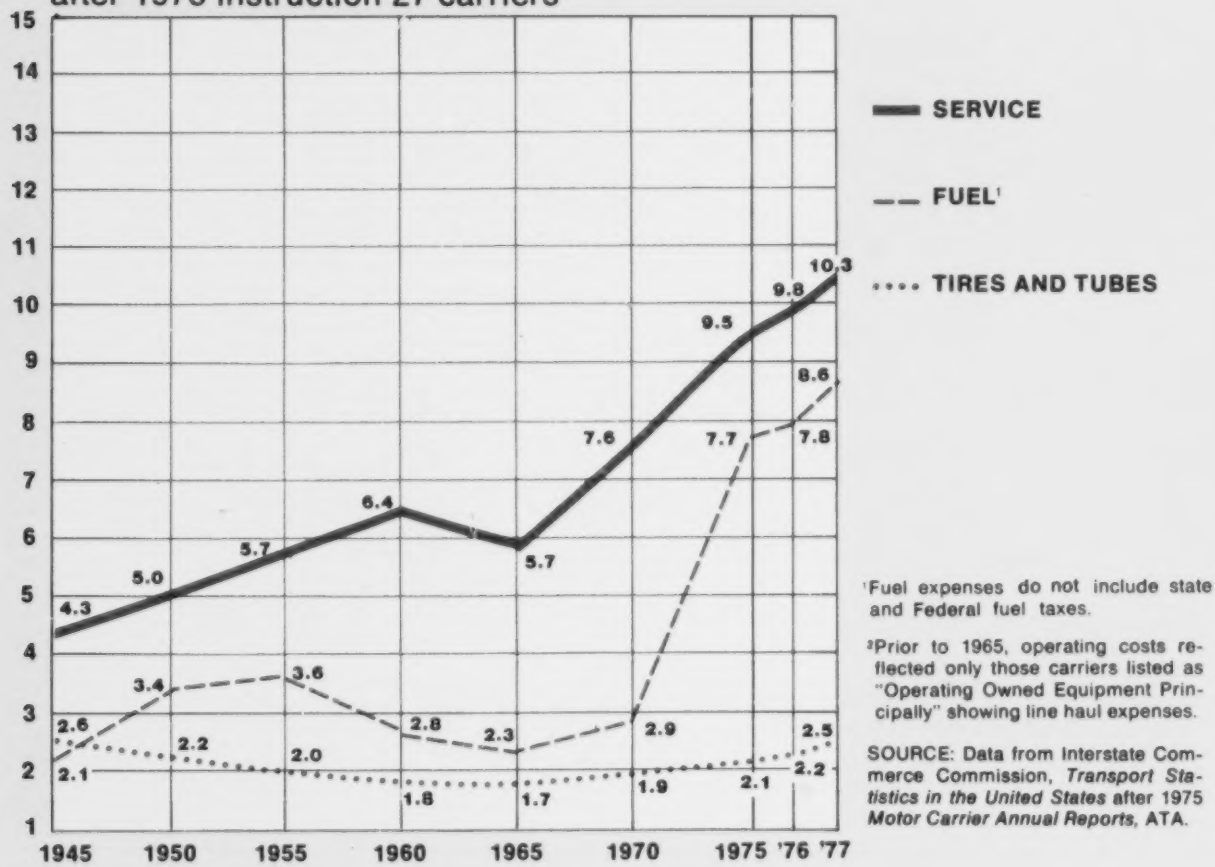
1 Payments for net interest and income taxes come out of net revenue and are excluded from this analysis.
2 Reflects freight revenue from intercity services only.
3 Prior to 1965, operating costs reflect only those carriers listed as "Operating Owned Equipment Principally."
SOURCE: Data from Interstate Commerce Commission, *Transport Statistics in the United States.*

Operating Costs

Fuel costs based on data for Class I carriers of general freight have escalated more rapidly than have costs for repairs and services due to the dramatic rise in oil prices. From a level of 2.9 cents per vehicle mile in 1970, to a figure almost three times that amount in 1977, or 8.6 cents, fuel costs seem destined to surge even higher in the period ahead. Meanwhile, tire and tube expenses on a vehicle mile basis have remained in the same range for several years although edging up slightly in 1977 to 2.5 cents per vehicle mile.

Operating Costs[2]—fuel, tires and tubes, repairs and servicing per intercity vehicle mile—in cents

class I intercity common carriers of general freight, after 1975 instruction 27 carriers



[1]Fuel expenses do not include state and Federal fuel taxes.

[2]Prior to 1965, operating costs reflected only those carriers listed as "Operating Owned Equipment Principally" showing line haul expenses.

SOURCE: Data from Interstate Commerce Commission, *Transport Statistics in the United States* after 1975 *Motor Carrier Annual Reports*, ATA.

Costs

Motor carrier insurance expenses and wage expenses are broken out into subcategories as an illustration of the distribution of these dollars. Over half of the wage dollar is spent on drivers and their helpers, which comprise the largest single component of a carrier's work force.

Cargo loss and damage remains the prime insurance expenditure and in 1977, 1.27% of the revenues of Class I intercity common carriers of general freight went to pay cargo insurance and freight claims. Expenditures for insurance coverage are one of the fastest rising of motor carrier costs, as they are for all the motoring public.

Freight Claim Experience

class I intercity common carriers of general freight, after 1975 instruction 27 carriers.

cargo insurance and cargo loss and damage expressed as percent of revenue

SOURCE: Data from Interstate Commerce Commission, *Transport Statistics in the United States, Motor Carrier Annual Report*, ATA.

Distribution of the Motor Carrier Wage Dollar 1977

Class I intercity common carriers of general freight instruction 27. *How each dollar paid in wages, salaries and bonuses is distributed among the major employee classifications.*

Officers & Supervisors	16.4¢
Drivers & Helpers	53.5
Owner-Operator Drivers	2.4
Vehicle Repair & Service	5.6
Clerical & Administrative	8.6
Cargo Handlers & Other labor	13.5

SOURCE: *Motor Carrier Annual Report*, ATA.

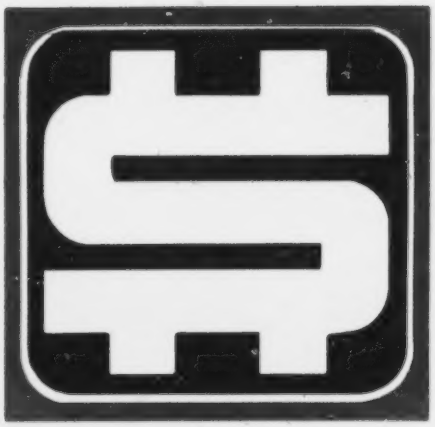
The Insurance Dollar 1977

class I intercity common carriers of general freight— instruction 27

motor carrier insurance =2.2% of gross revenue

Public liability and property damage	35.0%
Cargo Loss & damage	56.5%
Fire, theft & collision	5.3%
Other insurance expenses	3.2%
Total	**100.0%**

SOURCE: *Motor Carrier Annual Report*, ATA.



Revenue Dollar

Allocation of carrier expenses into activity accounts allows evaluation of these items along the functional breakouts of the motor carrier operations. Prior to the 1974 ICC accounting changes, many expense figures were reported in a different manner due to various accounting definitions. As an example, a total of line haul expenses and pickup and delivery accounts is generally comparable to the "Transportation Expense" figure existing in the pre 1974 reports.

Particularly significant in a review of the data are the differences between the general freight carriers and specialized carriers. The general freight carrier, the bulk of whose business is less than truckload, has platform, terminal and billing and collecting expenses far in excess of the specialized hauler. Since the general freight carrier uses the terminal as a collecting and distributing point for his LTL shipments, his pickup and delivery expenses are also much higher (by a margin in 1977 of 5 to 1) than for specialized carriers.

Where the Revenue Dollar Goes

		Line-Haul	Pickup Delivery	Billing & Collecting	Plat-form	Terminal	Main-tenance	Traffic & Sales	Insurance & Safety	General & Admini-strative	Net Operat-ing Revenue
Total All Carriers	1974	52.8¢	15.5¢	1.6¢	7.8¢	7.1¢	1.9¢	2.3¢	0.9¢	5.4¢	4.7¢
Total All Carriers	1975	53.1¢	15.2¢	1.6¢	7.2¢	7.7¢	1.8¢	2.5¢	0.9¢	5.7¢	4.3¢
Total All Carriers	1976	52.8¢	15.2¢	1.7¢	7.7¢	7.5¢	1.7¢	2.5¢	0.8¢	5.1¢	4.9¢
Total All Carriers	1977	53.5¢	14.9¢	1.7¢	7.6¢	7.8¢	1.7¢	2.3¢	0.8¢	4.5¢	5.2¢

1977 By Segment

	Line-Haul	Pickup Delivery	Billing & Collecting	Plat-form	Terminal	Main-tenance	Traffic & Sales	Insurance & Safety	General & Admin-istrative	Net Operat-ing Revenue
Total Class I	52.8¢	14.8¢	1.8¢	8.1¢	8.3¢	1.5¢	2.4¢	0.8¢	4.2¢	5.3¢
Total Class II	61.3¢	15.6¢	1.4¢	2.5¢	2.8¢	2.3¢	1.9¢	0.6¢	7.7¢	3.9¢
Total General Freight	41.8¢	20.5¢	2.4¢	10.8¢	9.7¢	1.4¢	2.8¢	0.8¢	4.3¢	5.5¢
Total Specialized	79.1¢	2.8¢	0.4¢	0.5¢	3.4¢	2.1¢	1.3¢	0.7¢	5.2¢	4.5¢

Class I Intercity Common Carriers of General Freight
Instruction 27 carriers

	Line-Haul	Pickup Delivery	Billing & Collecting	Plat-form	Terminal	Main-tenance	Traffic & Sales	Insurance & Safety	General & Admini-strative	Net Operat-ing Revenue
1974	38.4¢	22.4¢	2.7¢	12.1¢	8.3¢	1.6¢	3.0¢	1.0¢	5.0¢	5.5¢
1975	38.1¢	23.4¢	2.8¢	12.2¢	8.9¢	1.6¢	3.3¢	1.0¢	4.5¢	4.2¢
1976	38.3¢	23.5¢	2.8¢	12.3¢	8.0¢	1.5¢	3.2¢	0.9¢	3.9¢	5.6¢
1977	39.0¢	23.4¢	2.7¢	13.4¢	6.9¢	1.4¢	3.1¢	0.9¢	3.5¢	5.7¢
1978p	39.4¢	23.0¢	2.5¢	13.7¢	6.6¢	1.5¢	3.1¢	0.9¢	3.4¢	5.9¢

p-preliminary
SOURCE: *Motor Carrier Annual Report*, ATA.

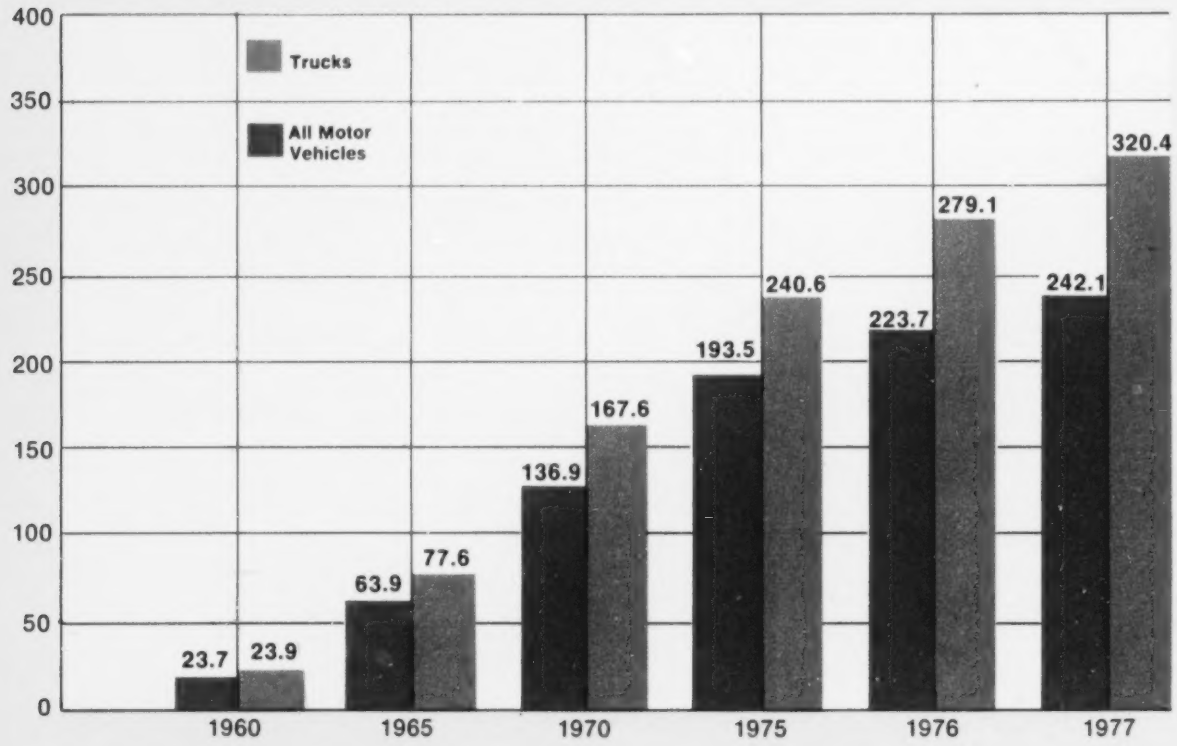
Taxes

Over a twenty year period the amount of state and Federal highway user taxes paid by trucks has increased over 320 percent while the amount paid by motor vehicles went up 242 percent. These monies derived from registration fees, motor fuel taxes as well as other special fees and taxes have been paid to finance highway construction and maintenance.

A subsequent table shows the dollar amount contributions by trucks over a period of years.

Percent Increase Of State And Federal Highway User Taxes Paid[1]

percent increase based on calendar year 1957



[1]Federal taxes include only those excises paid by highway users that were dedicated to the Highway Trust Fund.

SOURCE: Based on data compiled for the annual editions of *"Truck Taxes by States,"* Department of Interstate Cooperation, ATA.

Taxes

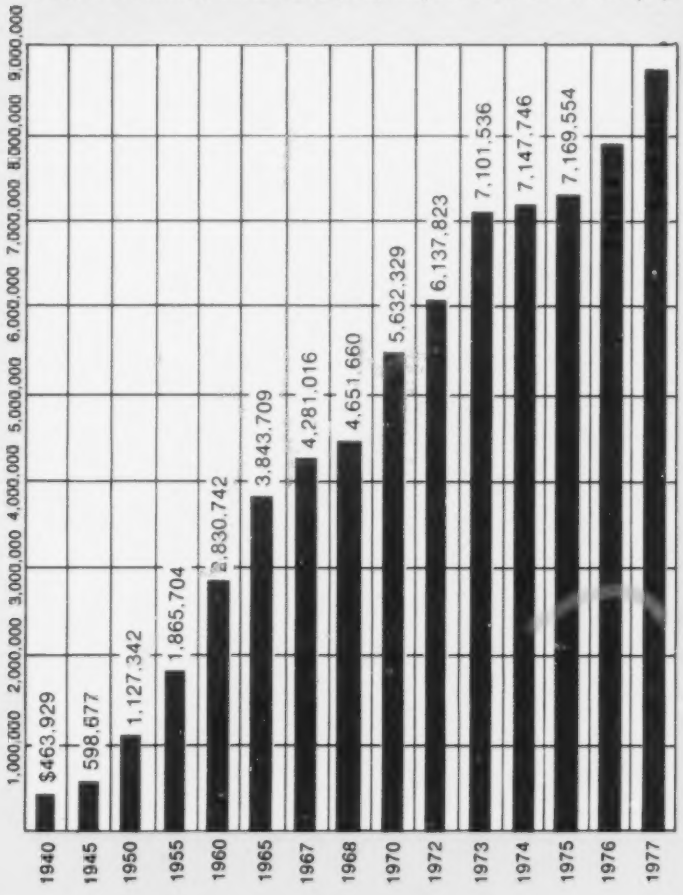
Trucks, which comprise 19.3 percent of total motor vehicle registrations and travel approximately 22 percent of the total vehicle-miles in 1977, more than paid their way for highway usage. For their use of all highways, roads and streets, trucks paid more than $8.8 billion, or 39.8 percent of the combined federal and state highway-user taxes in 1977, $870 million more than the 1976 payment and over 19 times the amount paid in 1940.

The federal taxes produced 33.8 percent of this amount, with 66.2 percent derived from state taxes. A component breakdown of the source of each dollar paid to the various state and federal governments shows that motor fuel taxes account for 55.1 percent of state revenues and 53.7 percent of the Federal levies, or 54.6 percent of the total taxes paid.

Truck Highway Use Taxes Federal and State[1]

all private and for-hire trucks

(highway use tax figures do not include general taxes such as income, sales, and property and social security.[1])



[1]Since 1965, local taxes and toll fees have not been available. For purposes of comparability, these data have been excluded from earlier years. Totals will not, therefore, compare with previous published figures.

SOURCE: 1940-1952 Automobile Manufacturers Association. Subsequent years based on data from Federal Highway Administration.

Distribution of Truck Highway Use Payments 1977

These tables show how each dollar paid by truck owners and operators in highway use taxes was divided among the various special levies.

STATE[1] (Total All States)

55.1 Motor Fuel Taxes	31.3 Truck and Trailer Registration Fees	9.4 Miscellaneous Receipts	4.2 Motor Carriers Receipts

IN THOUSANDS

1940	$361,976	1965	$2,296,191
1945	412,176	1970	3,429,468
1950	782,020	1975	4,818,630
1955	1,311,099	1976	5,456,249
1960	1,709,428	1977	5,855,506

[1]Since 1965, local taxes and toll fees have not been available. For purposes of comparability, these data have been excluded from earlier years. Totals will not, therefore, compare with previous published figures.

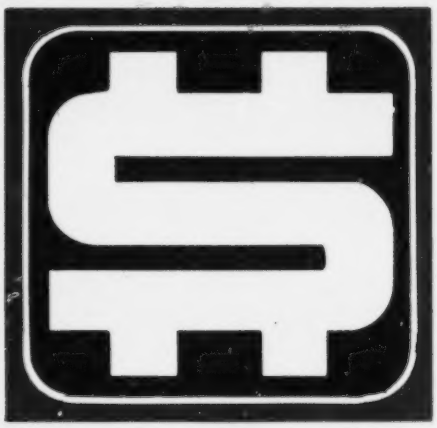
FEDERAL

53.7 Motor Fuel Taxes	21.2 Excise Tax on New Trucks & Trailers	11.2 Excise Tax on Tires & Tubes, Tread Rubber	6.4 Excise Tax on Lubricating Oil, Parts & Accessories	7.5 Truck Use Tax

IN THOUSANDS

1940	$ 101,953	1965	$1,547,518
1945	186,501	1970	2,202,861
1950	345,322	1975	2,350,924
1955	554,605	1976	2,523,164
1960	1,121,314	1977	2,993,592

SOURCE: 1940-1952 Automobile Manufacturers Association. Subsequent years based on data from Federal Highway Administration.



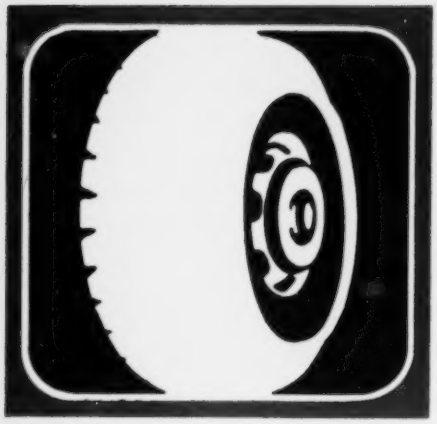
Retail Fuel Expense

From the fourth quarter 1975 through the first quarter 1979, the average price of diesel fuel—including state and federal taxes—has increased over 26 percent from 51.9 cents a gallon to 65.4 cents a gallon. Over the same period regular gas was up 18 percent in price and a quart of motor oil increased 21.5 percent. These prices, based on a monthly survey of 359 truckstop prices, are illustrative of rising motor carrier operating costs in all aspects of business operations.

Retail Fuel Expense[1]

		Avg Price/Gallon		Avg Price/Gallon		Avg Price/Quart	
		DIESEL	INDEX	REG. GAS	INDEX	QT. OIL	INDEX
1975:	4th Quarter	51.9¢	100.0	60.7¢	100.0	.79¢	100.0
1976:	1st Quarter	52.2	100.6	59.7	98.4	.79	100.0
	2nd Quarter	52.2	100.6	59.8	98.5	.81	102.5
	3rd Quarter	53.1	102.3	62.0	102.1	.82	103.8
	4th Quarter	53.9	103.9	62.4	102.8	.81	102.5
	Full Year	52.8	101.7	61.0	100.5	.81	102.5
1977:	1st Quarter	56.6	109.1	62.7	103.3	.83	105.1
	2nd Quarter	57.9	111.6	64.3	105.9	.85	107.6
	3rd Quarter	58.5	112.7	65.1	107.3	.86	108.9
	4th Quarter	58.8	113.3	64.7	106.6	.88	111.4
	Full Year	57.9	111.6	64.2	105.8	.86	108.9
1978:	1st Quarter	59.3	114.3	64.7	106.6	.90	113.9
	2nd Quarter	59.5	114.6	65.0	107.1	.91	115.2
	3rd Quarter	59.8	115.2	66.8	110.1	.92	116.5
	4th Quarter	61.1	117.7	68.4	112.7	.94	119.0
	Full Year	59.9	115.4	66.2	109.1	.92	116.5
1979:	1st Quarter	65.4	126.0	71.9	118.5	.96	121.5

[1]Includes state and Federal taxes.
SOURCE: Household Goods Carriers' Bureau data base.



OPERATING STATISTICS

Brief Facts

- Truck tonnage, as measured by the full year index of Class I and II carriers as well as other indices, continues to reach new highs.
- Close to 90 percent of fresh fruits and vegetables are shipped by truck.
- Over 70 percent of such diverse manufactured products as toys, watches, farm machinery, radios, carpets, clothing and office machines are transported by truck.
- The average length of haul for Class I general freight carriers was 457 miles in 1977.
- Trucks travelled over 329.5 billion vehicle miles in 1977. Single unit trucks travelled 266.0 billion miles while mileage of combinations was 63.5 billion.

Other Sources of Operating Statistics:

Highway Statistics
U.S. Department of Transportation, Federal Highway Administration
400 7th Street, S.W.
Washington, D.C.

Freight Commodity Statistics
Transport Statistics in the United States
Interstate Commerce Commission, Bureau of Accounts
Constitution Ave. & 12th St., N.W.
Washington, D.C. 20423

Census of Transportation
U.S. Department of Commerce
Bureau of the Census
Washington, D.C.

MVMA Motor Vehicle Facts & Trends
Motor Vehicle Manufacturers Association
300 New Center Building
Detroit, MI 48202

Truck Tonnage

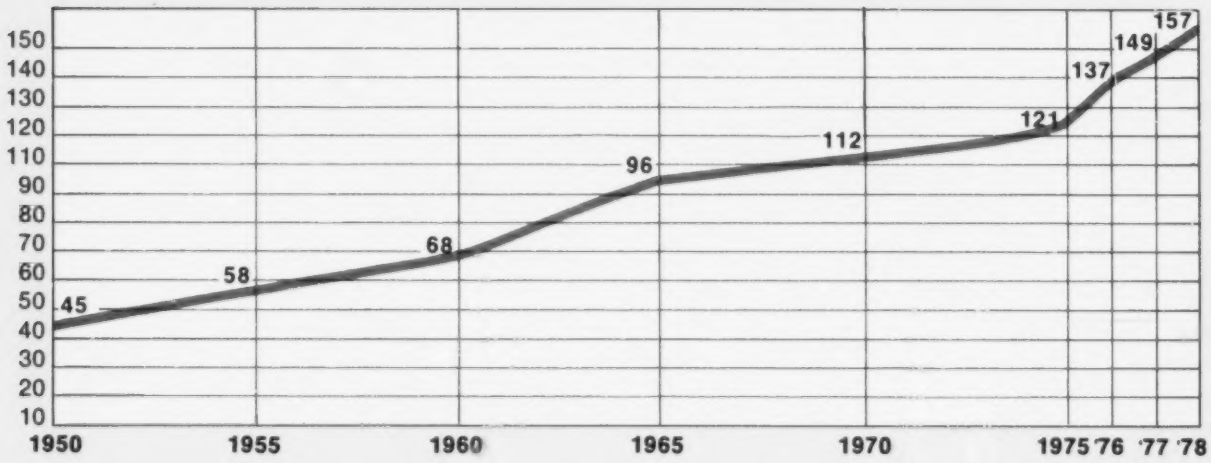
As motor carriers began to handle an ever increasing proportion of manufactured commodities and consumer goods, particularly in less than truckload movements, the potential of truck service as an economic indicator became more apparent. ATA compiles and publishes several truck tonnage report series, each somewhat different but all helpful in showing trends.

The indices charted below are based on data derived from the quarterly-full year report filed with the ICC by all Class I and II carriers. Similar ones are derived for each of the four quarters. These indices reflect freight movements of all types of motor carriers although a separate index is also shown for just general freight carriers. Both indices reflect a continuing upward trend for truck tonnage.

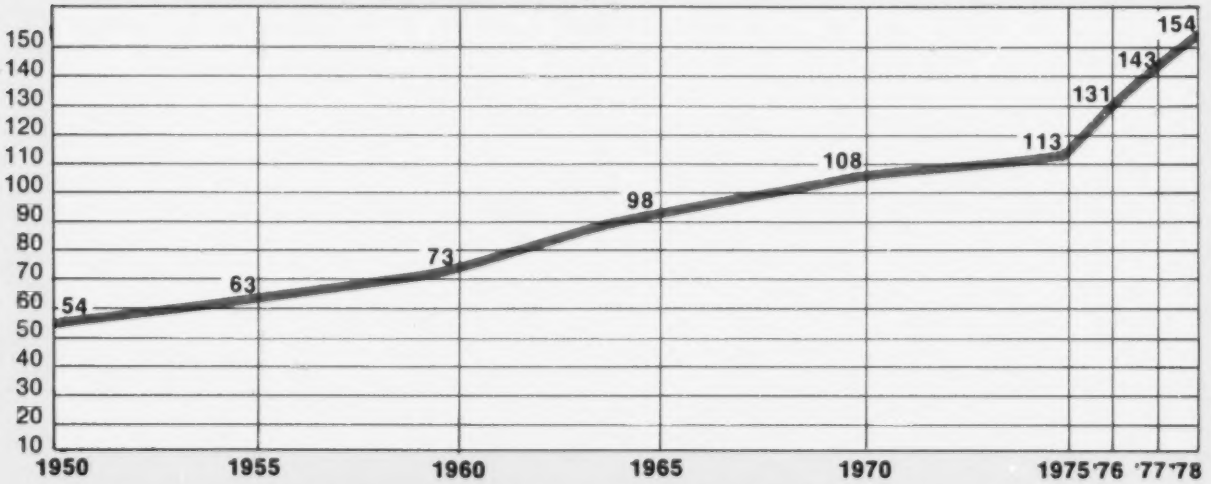
The index on the opposite page with its companion chart is based on the monthly truck tonnage series which covers system wide freight movements of sampled general freight carriers.

Truck Tonnage Full Year Index (1967=100)[1]

intercity traffic, class I and II intercity carriers—United States 1950-1978



class I and II general freight carriers only.



[1]These indices are derived by the following formula: (year-to-year tonnage recent change) + (100%) × (the previous index). Thus a previous year's index of 110.2 with a 3.2 percent yearly increase in tonnage would yield an index of 113.7 (+3.2% + 100% = 1.032 × 110.2 = 113.73 = 113.7); similarly a decrease of 3.2 percent would yield an index of 106.7 (-3.2% + 100% = 0.968 × 110.2 = 106.67). Therefore the index **does not** measure the actual increase in tonnage **volume** from a 1967 weight base; it can only be used to measure **trend movements.**

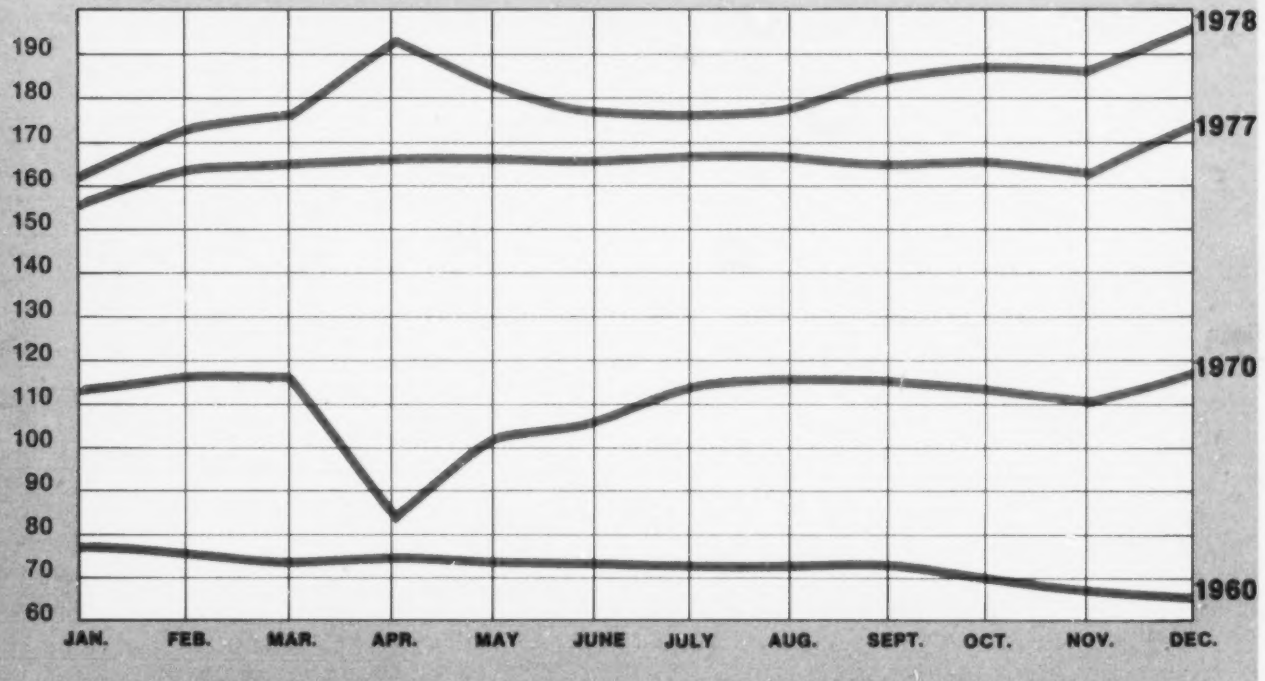
SOURCE: ATA Department of Research and Statistical Services.

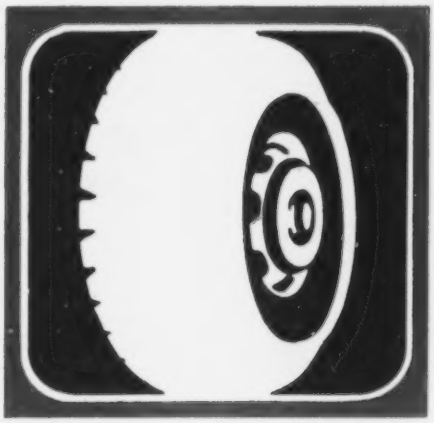
Seasonally Adjusted Monthly Truck Tonnage Index (1967 = 100)

	1960	1965	1967	1970	1975	1976	1977	1978
January	76.0	93.4	103.1	114.5	127.3	143.4	159.5	162.6
February	75.5	94.5	103.1	118.7	128.9	149.3	165.6	175.9
March	73.8	98.3	101.3	117.5	122.2	152.5	165.5	177.3
April	73.6	97.8	92.9	83.1	125.2	145.3	166.4	192.5
May	72.9	97.8	98.0	101.7	123.0	156.2	166.6	182.8
June	72.2	97.0	99.7	107.8	128.3	153.4	165.8	178.5
July	71.4	97.3	97.9	114.9	131.2	155.4	168.1	177.6
August	71.2	97.3	101.2	116.7	138.5	155.3	167.5	177.6
September	72.9	97.8	99.5	115.1	140.1	154.8	165.6	184.3
October	70.6	99.6	99.6	113.6	137.5	153.0	166.8	188.5
November	68.1	101.2	102.8	110.3	137.6	154.0	163.6	186.2
December	67.5	102.6	104.3	118.2	141.8	154.8	172.9	197.1

SOURCE: ATA Department of Research and Statistical Services.

Seasonally Adjusted Monthly Truck Tonnage Index





Products

Motor carriers haul virtually any product that will fit on a truck, including some for which equipment modifications must be made. In fact most of the products used by the average consumer are transported at least part of the way by truck.

Trucks delivered virtually all livestock to major markets along with an increasing majority of fresh fruits and vegetables. Over 88 percent of all fresh fruits and vegetables were shipped by trucks to markets in 41 major cities in 1977. Trucks also carried a large portion of such mineral products as sand and gravel, crushed stone and anthracite coal.

Among various manufactured products, as measured by tonnage, trucks carried over 72 percent of toys, 79 percent of watches, 80 percent of carpets and 82 percent of clothing.

The 1978 motor carrier tonnage index by type of carrier shows gains in all nine commodity classes over 1977 results with the change in the heavy machinery group being the most significant.

Motor Carrier Tonnage By Type of Carrier

indices by commodity classes (1967=100) class I & II intercity carriers

	1945	1950	1955	1960	1965	1970	1975	1976	1977	1978
General Freight	28	50	63	73	98	108	113	131	143	154
Household Goods	17	38	64	88	83	116	136	147	166	176
Heavy Machinery	34	27	51	56	92	128	190	217	256	288
Liquid Petroleum	22	36	51	62	88	107	125	136	147	148
Refrigerated Liquid Products	41	52	66	71	105	108	108	111	183[1]	190
Refrigerated Solid Products	10	25	35	53	87	109	165	179		
Agriculture Commodities	27	42	49	82	99	117	162	169	173	200
Motor Vehicles	7	58	72	79	112	111	132	162	185	191
Building Materials	15	45	74	53	90	110	127	153	169	183
All Other Commodities	19	46	55	66	93	117	137	155	167	176

SOURCE: ATA Department of Research and Statistical Services.
[1]Refrigerated products were combined in 1977.

Mineral Products

shipments by truck and percent of total

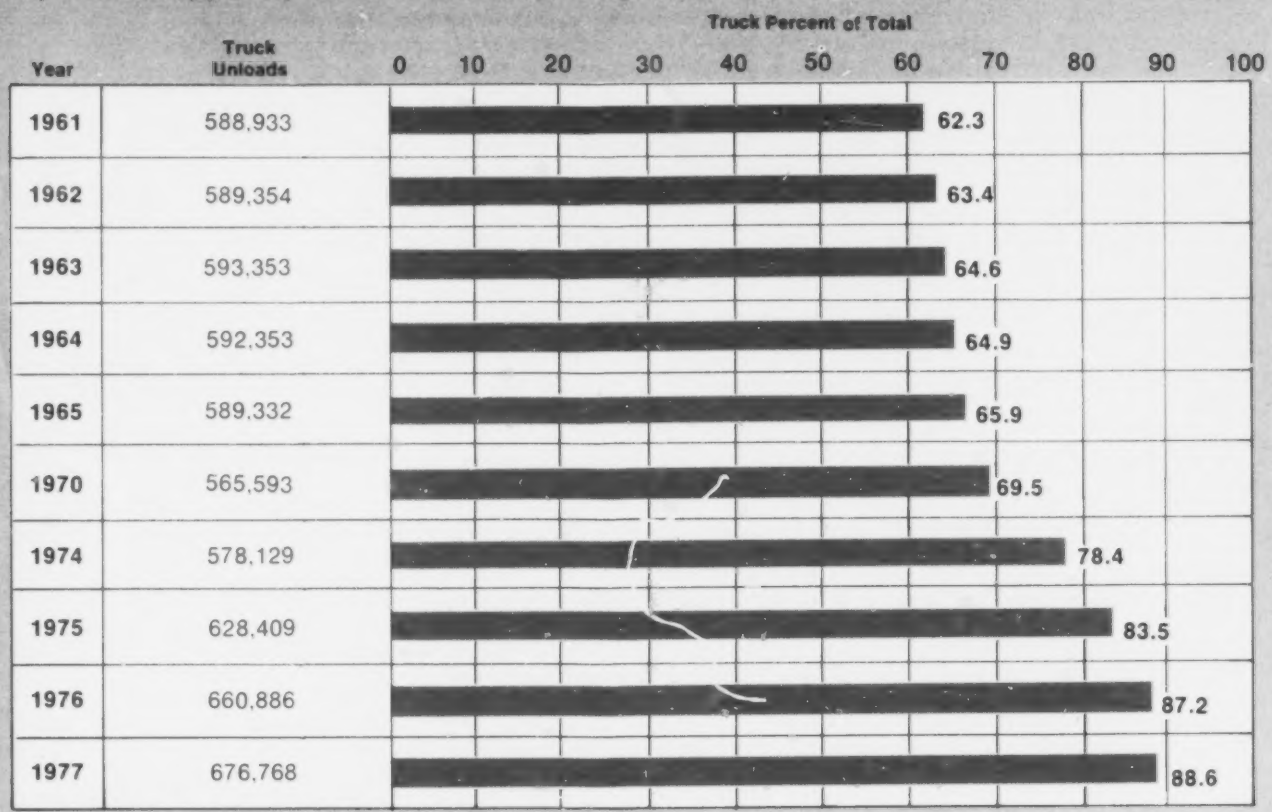
Year	Sand & Gravel M Tons	%	Crushed Stone M Tons	%	Portland Cement M Tons	%	Coal Anthracite M Tons	%	Refined Petroleum Products M Tons	%	Crude Petroleum Products M Tons	%
1950	263,791	71.2	135,415	54.1	10,288	24.0	6,881	16.2	130,769	31.7	145,781	1[illegible].9
1955	456,902	77.2	256,093	54.8	16,378	29.8	8,050	29.1	199,681	35.5	222,604	23.[illegible]
1960	622,988	87.8	417,706	68.0	27,674	47.1	8,668	50.9	242,532	36.9	270,375	24.8
1965	808,998	89.0	573,120	73.7	48,278	68.6	6,812	51.5	345,784	41.5	385,481	29.1
1970	855,307	90.0	633,940	73.0	58,510	79.7	4,527	56.2	425,200	39.7	466,100	27.7
1974	782,888	86.5	828,558	79.5	67,003	84.3	3,918	56.5	481,993	30.5	552,036	29.5
1975	682,874	86.5	723,550	80.3	58,461	86.3	3,600	63.5	444,398	36.4	520,605	28.4
1976	767,856	86.7	722,220	80.2	62,251	86.6	3,626	67.4	N/A	N/A	N/A	N/A
1977	697,000	75.0	771,030	80.8	68,156	87.5	3,595	64.3	N/A	N/A	N/A	N/A

[1]Thousand Tons [2]Domestic Transportation Only N/A=Not Available

SOURCE: *U.S. Department of Interior Minerals Yearbook* and *Survey by the Association of Oil Pipe Lines.*

Fresh Fruits and Vegetables

percent shipped by truck, 41 cities reporting



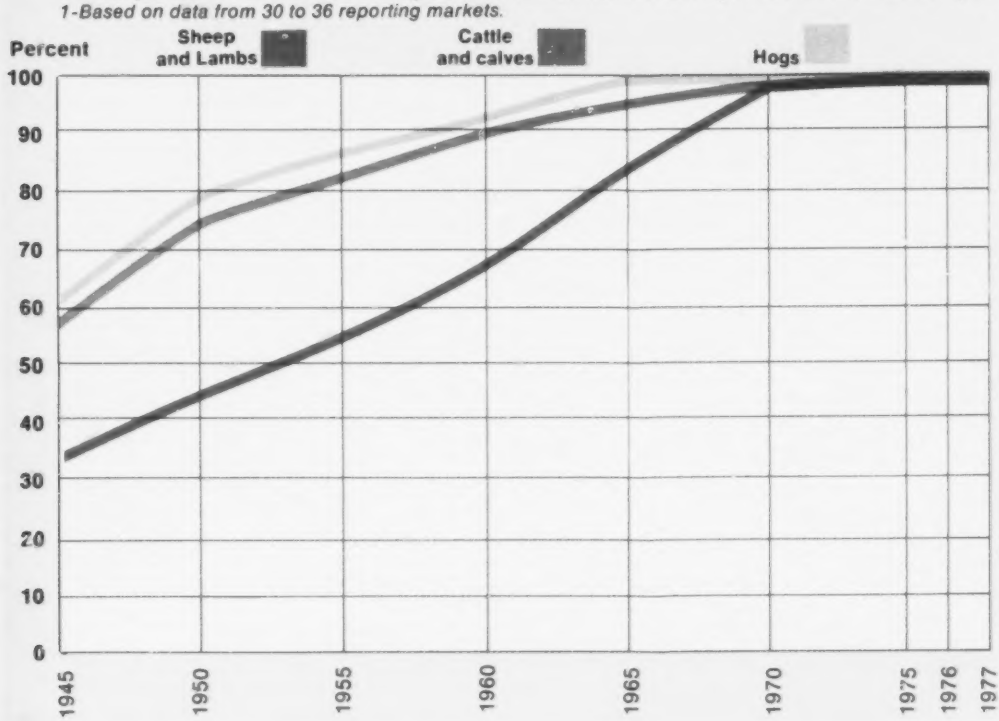
Year	Truck Unloads	Truck Percent of Total
1961	588,933	62.3
1962	589,354	63.4
1963	593,353	64.6
1964	592,353	64.9
1965	589,332	65.9
1970	565,593	69.5
1974	578,129	78.4
1975	628,409	83.5
1976	660,886	87.2
1977	676,768	88.6

SOURCE: Agricultural Marketing Service, U.S. Dept. of Agriculture.

Livestock at Major Markets

truck percent of total receipts of movement from producer to stockyards

1-Based on data from 30 to 36 reporting markets.

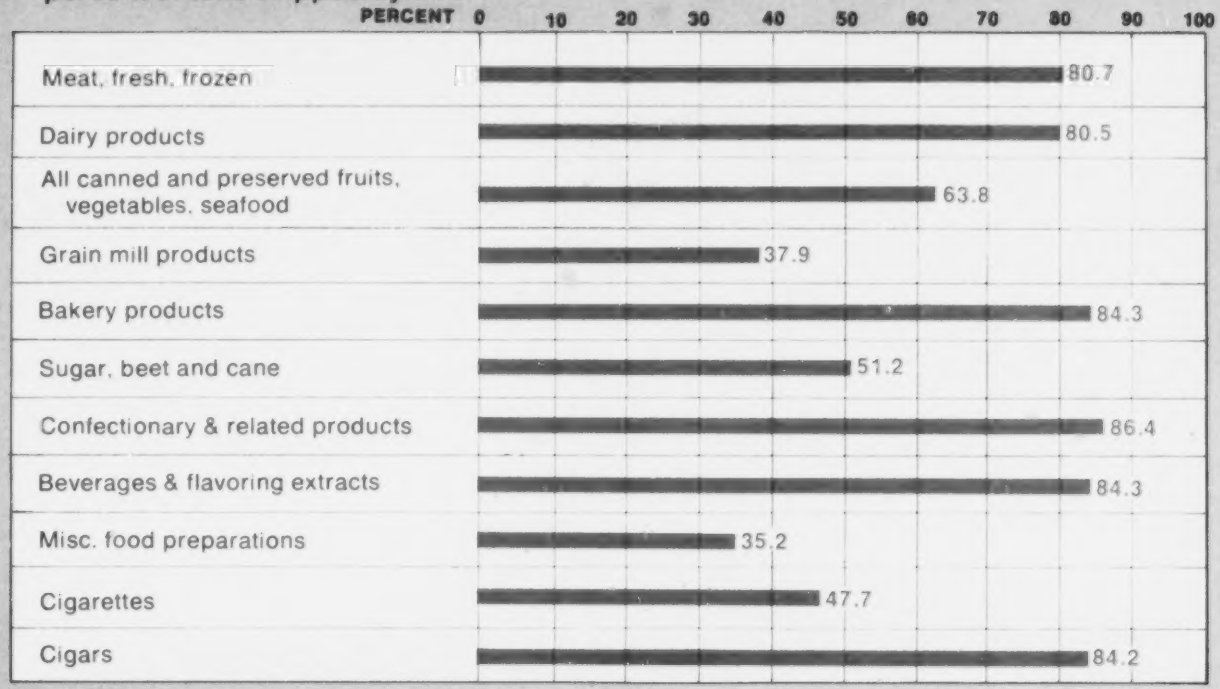


	Sheep and Lambs	Cattle and calves	Hogs
1945	34.3	58.8	60.3
1950	44.2	76.3	79.2
1955	54.1	82.9	87.0
1960	67.0	90.6	91.5
1965	85.5	95.4	99.8
1970	98.9	99.6	99.9
1975	99.6	99.7	99.9
1976	100.0*	99.9	99.6
1977	100.0	99.9	100.0

*Rail receipts were less than 0.1% of total.

Agricultural Products

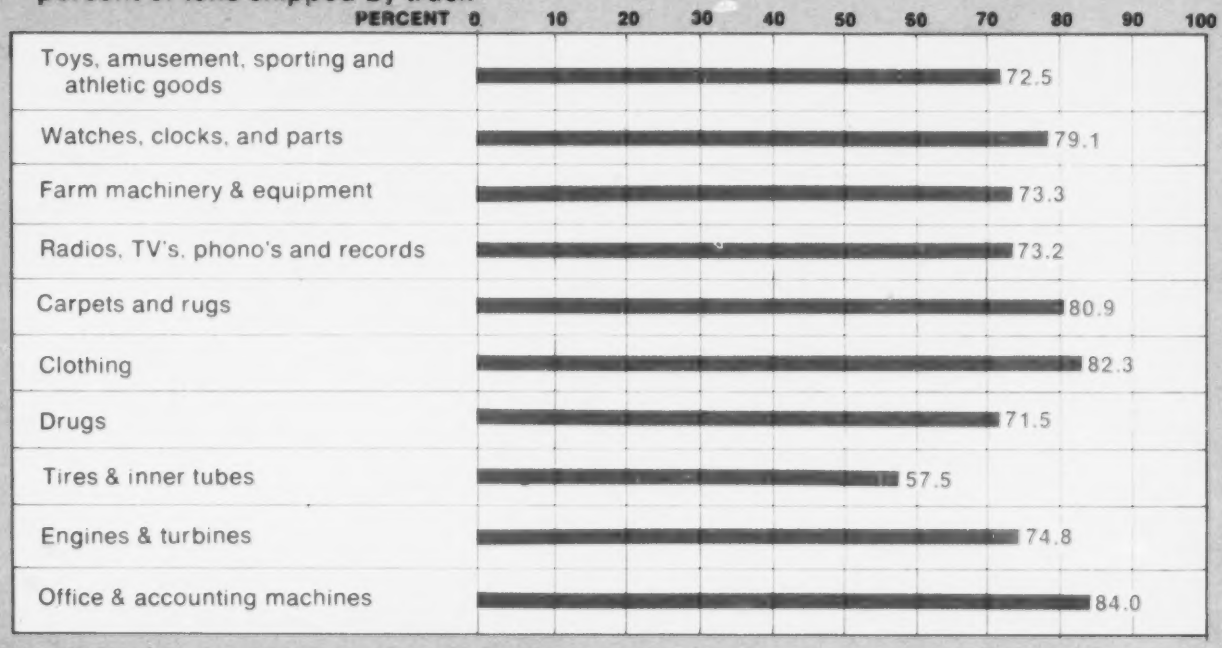
percent of tons shipped by truck


PERCENT 0 10 20 30 40 50 60 70 80 90 100
Meat, fresh, frozen 80.7
Dairy products 80.5
All canned and preserved fruits, vegetables, seafood 63.8
Grain mill products 37.9
Bakery products 84.3
Sugar, beet and cane 51.2
Confectionary & related products 86.4
Beverages & flavoring extracts 84.3
Misc. food preparations 35.2
Cigarettes 47.7
Cigars 84.2

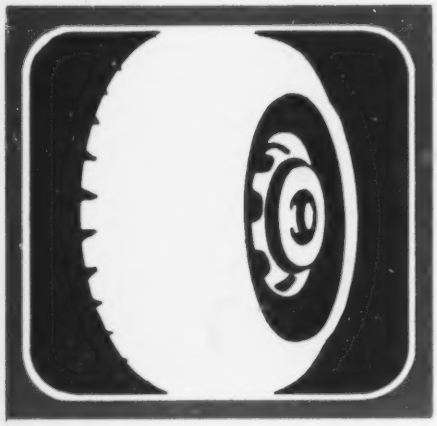
SOURCE: *1972 Census of Transportation*, U.S. Department of Commerce.

Manufactured Products

percent of tons shipped by truck


PERCENT 0 10 20 30 40 50 60 70 80 90 100
Toys, amusement, sporting and athletic goods 72.5
Watches, clocks, and parts 79.1
Farm machinery & equipment 73.3
Radios, TV's, phono's and records 73.2
Carpets and rugs 80.9
Clothing 82.3
Drugs 71.5
Tires & inner tubes 57.5
Engines & turbines 74.8
Office & accounting machines 84.0

SOURCE: *1972 Census of Transportation*, U.S. Department of Commerce.



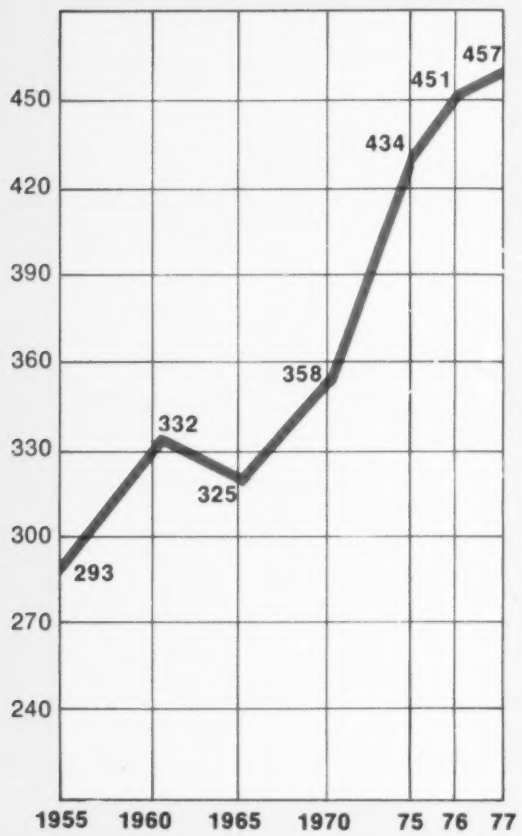
Averages

Average length of haul and average load for Class I carriers of general freight have trended upward over time. Certainly, the upward revision of the revenue limits for the various classes of motor carriers has tended to make "average" figures for Class I carriers larger, as many of these larger carriers are multi-regional or national in operation. These figures are somewhat indicative of the modal shift from rail to t.uck over the long time period measured and also of the geographic growth in markets of shippers.

Average Length of Haul

in miles, class I intercity common carriers of general freight

United States 1955-1977

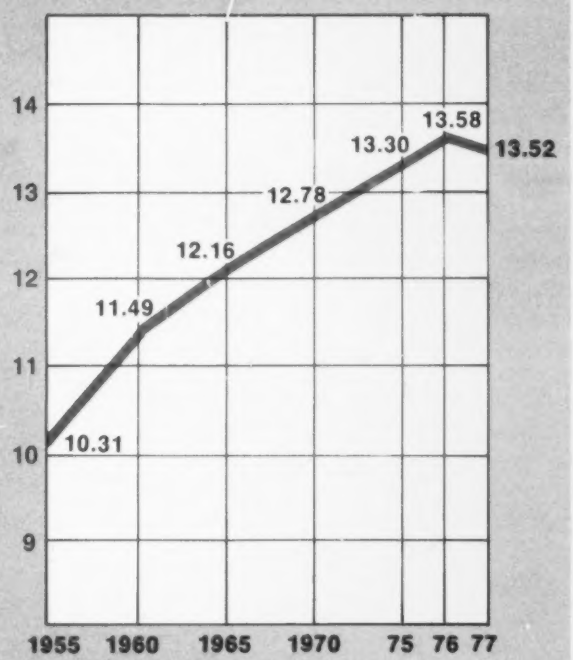


SOURCE: Data from Interstate Commerce Commission, *Transport Statistics in the United States*, after 1975 data from *Motor Carrier Annual Report* instruction 27 class 1 carriers of general freight, ATA.

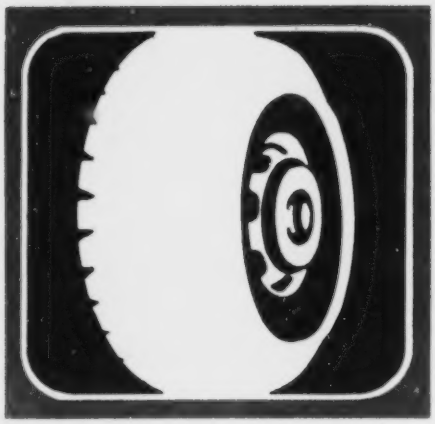
Average Load

in tons, class I intercity common carriers of general freight

United States 1955-1977



SOURCE: Data from Interstate Commerce Commission, *Transport Statistics in the United States*, after 1975 data from *Motor Carrier Annual Report* instruction 27 class 1 carriers of general freight, ATA.



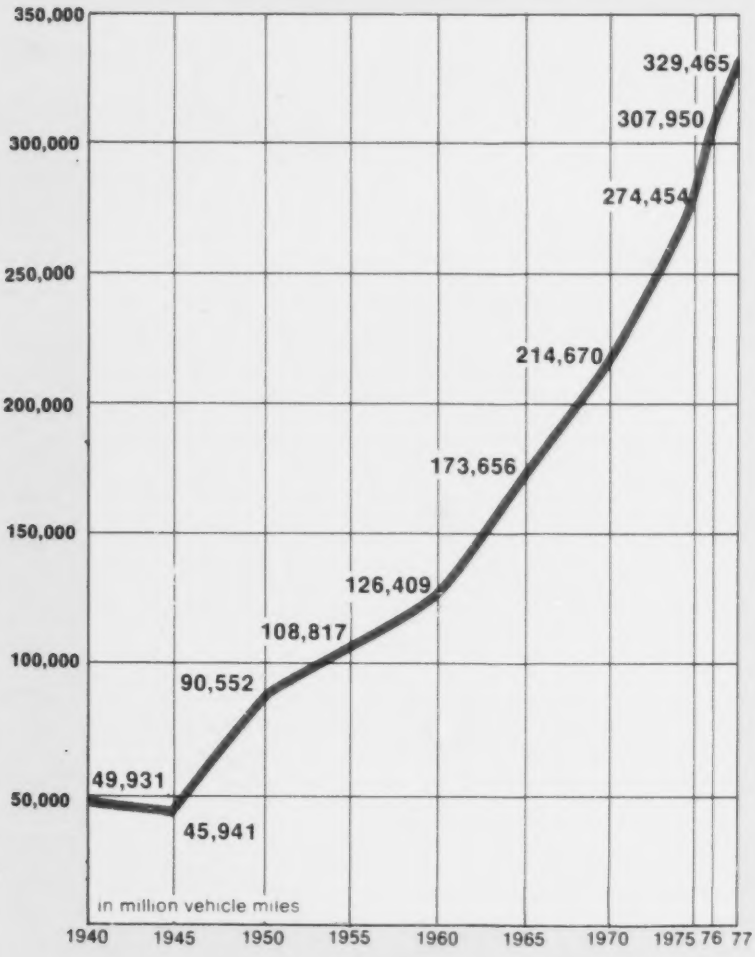
Vehicle Miles

The increasing importance of the role trucking plays in our economy is underscored by the data on truck vehicle miles. In 1977 trucks travelled over 329.5 billion vehicle miles, a 7 percent increase over the miles accumulated in 1976. Of that amount, truck combinations represented some 19 percent (63.5 billion miles) with the remainder being single unit trucks. Regulated carriers travelled approximately 20 billion miles in 1977.

The table on estimated motor vehicle travel in the United States puts the data on truck vehicle miles into perspective by showing the total miles travelled by all motor vehicles as close to 1.5 trillion miles.

Truck Vehicle Miles

all trucks (million miles)



Travel Total

million miles

	Main and Local Rural Roads	Urban Streets	Travel Total
1940	30,207	19,724	49,931
1945	27,181	18,760	45,941
1950	56,780	33,772	90,552
1955	69,096	39,721	108,817
1960[1]	81,722	44,687	126,409
1965	108,599	65,057	173,656
1970	134,064	80,606	214,670
1973	153,993	113,154	267,147
1974	153,180	114,339	267,519
1975	156,775	117,679	274,454
1976r	163,073	144,877	307,950
1977e	176,115	153,350	329,465

[1]Series revised after 1955.
e—Estimated ATA Department of Research and Statistical Services.
r—Revised.
SOURCE: U.S. Department of Transportation, Federal Highway Administration.

Estimated Motor-Vehicle Travel in The United States and Related Data[1] 1977 and Revised 1976

YEAR	ITEM	PASSENGER VEHICLES							CARGO VEHICLES			
		PERSONAL PASSENGER VEHICLES			BUSES							
		Passenger Cars[2]	Motor-cycles[2]	All Personal Passenger Vehicles	Commercial	School and Other Nonrevenue	All Buses	All Passenger Vehicles	Single-Unit Trucks	Combi-nations	All Trucks	All Motor Vehicles
	Motor-Vehicle Travel[3] (Millions of Vehicle-Miles)											
1977	Interstate Rural	—	—	83,813	293	166	459	84,272	19,930	21,690	41,620	125,892
1976		—	—	79,346	294	160	454	79,800	17,848	20,258	38,106	117,906
1977	Other Main Rural	—	—	312,898	793	1,235	2,028	314,926	94,800	28,700	123,500	438,426
1976		—	—	306,805	793	1,182	1,975	308,780	87,904	26,583	114,487	423,267
1977	Local Rural	—	—	78,552	91	640	731	79,283	9,950	1,045	10,995	90,278
1976		—	—	75,350	91	637	728	76,078	9,471	1,009	10,480	86,558
1977	All Rural	—	—	475,263	1,177	2,041	3,218	478,481	124,680	51,435	176,115	654,596
1976		—	—	461,501	1,178	1,979	3,157	464,658	115,223	47,850	163,073	627,731
1977	Interstate Urban	—	—	120,456	312	206	518	120,974	15,560	5,890	21,450	142,424
1976		—	—	112,504	313	200	513	113,017	14,458	5,452	19,910	132,927
1977	Other Urban	—	—	545,496	1,448	703	2,151	547,647	125,760	6,140	131,900	679,547
1976		—	—	524,174	1,408	683	2,091	526,265	119,114	5,853	124,967	651,232
1977	All Urban[4]	—	—	665,952	1,760	909	2,669	668,621	141,320	12,030	153,350	821,971
1976		—	—	636,678	1,721	883	2,604	639,282	133,572	11,305	144,877	784,159
1977	Total Rural and Urban	1,118,649	22,566	1,141,215	2,937	2,950	5,887	1,147,102	266,000	63,465	329,465	1,476,567
1976		1,075,762	22,417	1,098,179	2,899	2,862	5,761	1,103,940	248,795	59,155	307,950	1,411,890
1977	Number of Motorized Vehicles Registered	113,696,111	5,014,564	118,710,675	97,864	393,810	491,674	119,202,349	28,298,394	1,264,091	29,562,485	148,764,834
1976		110,188,640	4,981,496	115,170,136	96,841	381,498	478,339	115,648,475	26,554,071	1,224,810	27,778,881	143,427,356
1977	Average Miles Travel Per Vehicle	9,839	4,500	9,613	30,011	7,491	11,973	9,623	9,400	50,206	11,145	9,926
1976		9,763	4,500	9,535	29,936	7,502	12,044	9,546	9,369	48,297	11,086	9,844
1977	Fuel Consumed (Thousand Gallons)	80,225,460	451,320	80,676,780	582,740	401,360	984,100	81,660,880	26,255,000	11,709,400	37,954,400	119,625,280
1976		78,398,309	448,340	78,846,649	574,059	389,918	963,977	79,810,626	24,914,566	10,974,954	35,889,520	115,700,146
1977	Average Fuel Consumption Per Vehicle (Gallons)	706	90	680	5,955	1,019	2,002	685	928	9,263	1,284	804
1976		711	90	685	5,928	1,022	2,015	690	938	8,961	1,292	807
1977	Average Miles Traveled Per Gallon of Fuel Consumed	13.94	50.00	14.15	5.04	7.35	5.98	14.05	10.13	5.42	8.68	12.34
1976		13.72	50.00	13.93	5.05	7.34	5.98	13.83	9.99	5.39	8.58	12.20

[1]The 50 states and the District of Columbia report travel by highway category, number of motorized vehicles registered by vehicle type, and total fuel consumed. The travel and fuel data by vehicle type as well as related data are calculated by the Federal Highway Administration.

[2]Separate estimates of passenger car and motorcycle travel are not available

[3]Highway categories are based on functional classification in accordance with 23 U.S.C. 103 (C) (2), (C) (2), (D) (2) established for 1976 and differ from earlier years.

[4]Urban consists of travel on all roads and streets in urban places of 5,000 or greater population.

INDUSTRY GROWTH AND EQUIPMENT

Brief Facts

- Total truck registrations in the United States for 1977 were 28.3 million.
- California has over 3.1 million registered trucks, the nation's leading state in registrations.
- New truck registrations totaled 3,465,193 in 1977 and 3,963,400 in 1978.
- Truck trailer sales reached a new peak in 1977 of 187,152 units.
- In 1978 there were 16,874 Class I, II and III regulated motor carriers of property.

Other Sources Of Industry Growth And Equipment:

Financial & Operating Statistics
Motor Carrier Annual Report
American Trucking Associations, Inc.
1616 P Street, N.W.
Washington, D.C. 20036

Transportation Facts And Trends
Transportation Association Of America
Suite 1107
1100 17th Street, N.W.
Washington, D.C. 20036

MVMA Motor Vehicle Facts & Trends
Motor Vehicle Manufacturers Association
300 New Center Building
Detroit, MI 48202

Truck Trailer Manufacturers Association
2430 Pennsylvania Avenue
Washington, D.C. 20037

Truck Useage

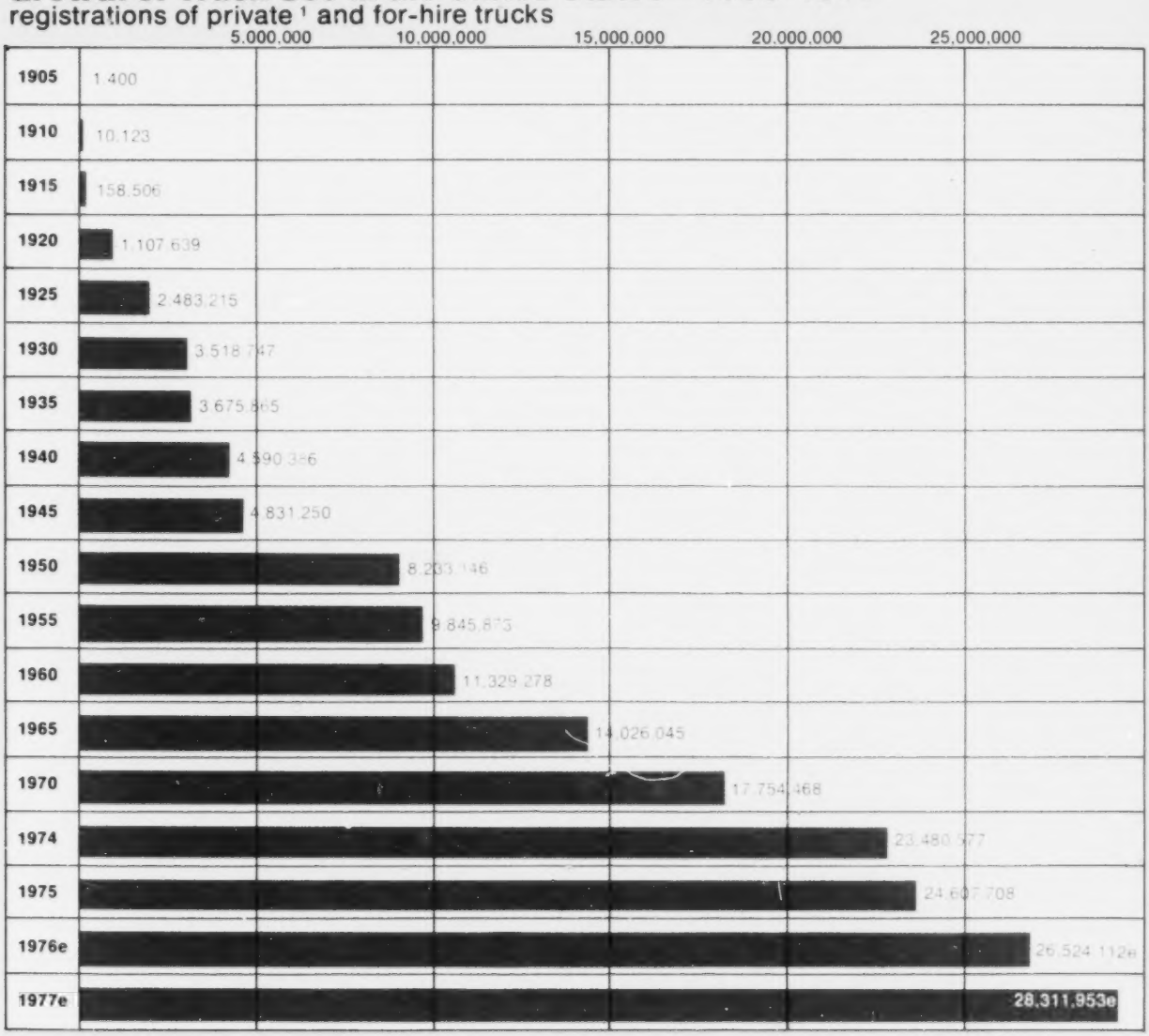
Along with a growing trucking industry comes the necessity for more equipment to serve the industry's customers. The equipment itself has undergone change as the manufacturers adapted new products and new designs to meet the demand for lighter, more fuel efficient, vehicles.

Truck registrations have increased consistently over the years although it is important to note that some 95 percent of these trucks are single unit vehicles with two or three axles. In 1977 private and for-hire trucks registered in the United States totaled 28,311,953, up 6.7 percent from 1976.

A state-by-state analysis of truck registrations shows California number one in truck population with over 3.1 million vehicles, a fact not surprising for the nation's most populous state. Texas is second with close to 2.4 million registered trucks and over a million vehicles separate these two leaders from other state registration totals.

Growth of Truck Use in the United States—1905-1977

registrations of private [1] and for-hire trucks



1 Private includes farm trucks throughout Trends.
r—Revised, e—Estimated
SOURCE: U.S. Department of Transportation. Federal Highway Administration.
Note: Government-owned trucks, of which there were 1,117,707 in 1974, are not included.

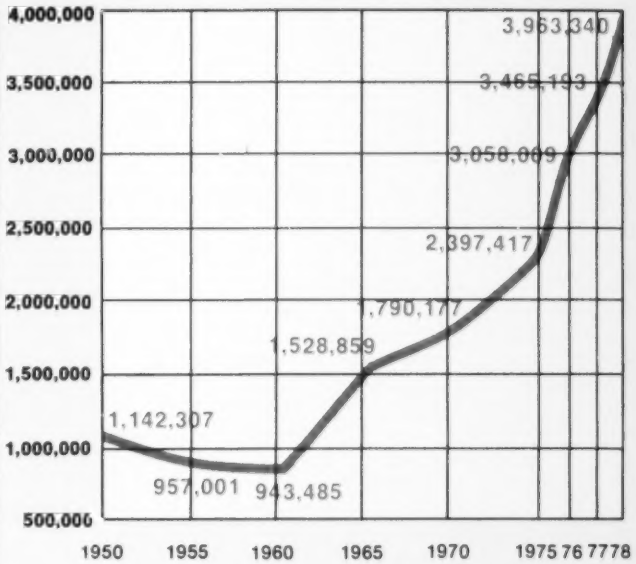
Truck Registration By States all private and for-hire trucks

	1965	1970	1975	1976	1977
Alabama	289,554	382,743	563,022	595,957	639,455
Alaska	32,614	39,919	76,535	86,763	88,924
Arizona	172,137	249,851	376,749	390,381	415,748
Arkansas	259,582	304,352	402,127	429,549	459,808
California	1,476,472	1,893,675	2,514,473	2,690,495	3,113,478
Colorado	256,649	322,508	462,332	491,638	525,214
Connecticut	147,124	142,641	132,530	142,456	142,222
Delaware	37,181	45,701	57,707	60,210	62,576
Florida	353,875	518,897	815,497	922,327	982,872
Georgia	350,773	493,432	662,263	700,246	718,471
Hawaii	32,663	42,412	61,484	66,578	71,531
Idaho	126,229	132,461	225,538	240,210	256,968
Illinois	497,565	629,636	926,850	1,094,482	1,081,335
Indiana	427,363	489,478	717,453	763,985	812,456
Iowa	292,802	376,692	524,215	560,484	550,553
Kansas	351,564	400,569	542,671	568,193	560,091
Kentucky	287,103	367,978	544,547	596,768	650,986
Louisiana	273,213	352,455	497,566	620,692	655,515
Maine	77,786	103,671	138,376	132,181	149,223
Maryland	166,990	226,339	326,415	342,206	370,762
Massachusetts	196,496	233,343	296,858	299,873	359,773
Michigan	458,299	597,145	860,530	921,917	973,831
Minnesota	320,000	425,715	540,753	659,071	667,358
Mississippi	228,965	279,571	364,867	387,627	407,435
Missouri	412,660	496,782	665,186	684,595	726,547
Montana	131,169	163,354	221,840e	237,713	265,956
Nebraska	205,319	250,300	339,931	369,403	352,459
Nevada	59,259	79,408	109,022	123,702	131,744
New Hampshire	47,200	52,171	72,784	75,183	81,523
New Jersey	292,676	319,284	350,419	354,087	358,039
New Mexico	123,475	170,391	257,249	275,655	297,832
New York	550,568	631,678	763,203	824,203	837,704
North Carolina	393,750	533,156	756,335	812,376	873,157
North Dakota	128,119	152,764	211,960	219,612	227,974
Ohio	489,996	621,336	833,574	907,277	1,084,523
Oklahoma	372,493	474,515	650,242	683,197	715,867
Oregon	191,206	229,773	282,151	332,410	371,235
Pennsylvania	574,913	702,066	1,013,848	1,114,504	1,137,856
Rhode Island	41,003	51,022	59,419	68,419	76,231
South Carolina	176,734	238,363	348,708	342,809	370,695
South Dakota	108,484	125,920	174,177	187,081	196,606
Tennessee	280,217	385,045	600,371	617,286	653,202
Texas	1,133,057	1,477,151	2,051,738	2,248,660	2,375,716
Utah	109,640	136,481	247,781	262,066	274,577
Vermont	29,264	36,012	49,544	56,397	61,085
Virginia	256,595	340,257	510,018	506,267	457,740
Washington	313,096	449,394	617,338	668,046	735,764
West Virginia	130,014	166,325	220,959	224,560	348,875
Wisconsin	274,007	322,544	428,838	412,499	423,072
Wyoming	71,109	82,907	126,908	138,890	147,516
District of Columbia	17,023	14,885	12,807	12,926	11,873
Total	**14,026,045**	**17,754,468**	**24,607,708**	**26,524,112e**	**28,311,953e**

r-Revised e-Estimated p-Preliminary SOURCE: U.S. Department of Transportation Federal Highway Administration.

New Truck Registrations[1] by gross vehicle weights

	Light (below 10,000 pounds)	Medium (10,001-26,000 pounds)	Heavy (over 26,000 pounds)	Total
1950	789,036	332,188	21,083	1,142,307
1955	627,268	281,468	48,265	957,001
1960	657,473	224,575	61,437	943,485
1965	1,194,227	239,191	95,441	1,528,859
1970	1,456,201	208,712	125,264	1,790,177
1975	2,100,017	189,492	107,908	2,397,417
1976	2,724,435	220,479	113,095	3,058,009
1977	3,080,854	229,904	154,435	3,465,193
1978	N/A	N/A	N/A	3,963,340



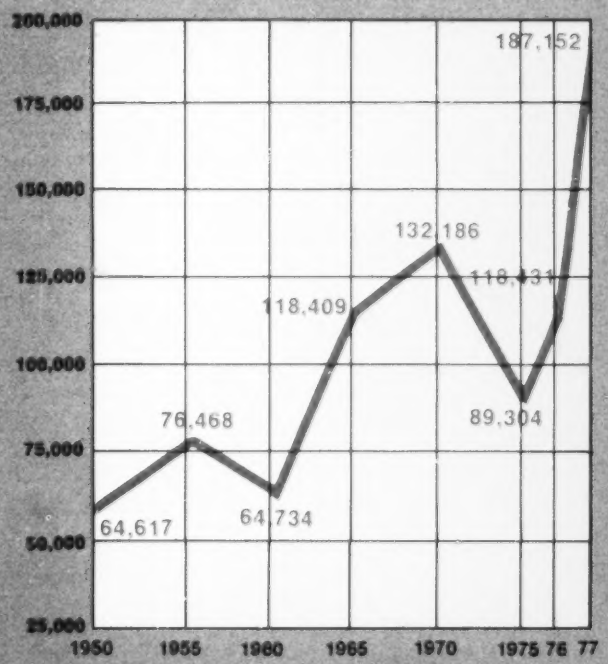
[1]This table reflects the number of new trucks placed in highway service during each year exclusive of government vehicles.

N/A– Not Available

SOURCE: *Automotive Industries* (1948-1952), *Commercial Car Journal* (1953-1959), after 1959, *Automotive News*.

Truck—Trailer Sales

	Vans	Other Types	Total
1950	38,257	26,360	64,617
1955	46,098	30,370	76,468
1960	35,030	29,704	64,734
1965	65,909	52,500	118,409
1970	71,274	60,912	132,186
1975r	43,596	45,708	89,304
1976	61,726	56,705	118,431
1977	98,687	88,465	187,152



[1]Included throughout are separately sold trailer chassis. Separately sold detachable van bodies and dump trailer chassis are included, effective 1960.

SOURCE: *U.S. Department of Commerce, Bureau of the Census.*

r—Revised

Includes only capacities of 5 tons and over.

Registrations

The number of new motor vehicle registrations was up in 1978 with the truck portion contributing more to the increase than did passenger cars. Overall, 1978 new registrations were up 4.9% over 1977 while truck and passenger cars registrations showed gains of 14.4% and 1.8% respectively.

The table showing truck distribution by type of vehicle and use is based on data from the *1972 Truck Inventory and Use Survey, Census of Transportation* and as such contains estimates. It assumes the percentage distribution for the groups remains the same as it did in 1972 with the component numbers extrapolated from 1977 total truck registrations, or 28,311,953. Hard data for this table will be available from the *1977 Census of Transportation.*

The breakout of truck registrations by gross vehicle weight shows that in 1977 heavy trucks (over 26,000 pounds) posted a 36.6 percent gain over 1976. Meanwhile, the market for light trucks (under 10,000 pounds) continued to be strong as these vehicles serve in a variety of ways. They account for 89 percent of new truck registrations.

Truck trailer sales totaled 137,152 units in 1977, a significant increase over the level in 1976, or 58 percent, and well above the peak year of 1970 with 132 thousand units.

New Motor Vehicle Registrations

Index 1974 = 100	Passenger Cars	Index	Trucks[1,2]	Index	Total[2]	Index
1974	8,701,094	100.0	2,656,918	100.0	11,358,012	100.0
1975	8,261,840	95.0	2,397,417	90.2	10,659,257	93.8
1976	9,751,485	112.1	3,058,009	115.1	12,809,494	112.8
1977[3]	10,826,234	124.4	3,509,328	132.1	14,335,564	126.2
1978	10,946,104	125.8	3,963,340	149.2	14,909,444	131.3

[1]Includes Motor Home Chassis in 1974-35,792, 1975-44,294, 1976-89,918, 1977-99,779.
[2]Registration for Oklahoma not included.
[3]Registration for Arkansas, March through December, and Maine, December only, are not included.

SOURCE: R. L. Polk & Company. Permission for further use must be obtained from R. L. Polk and Company.

Distribution of Trucks by Type of Vehicle and Use—1977[1]

	PRIVATE		FOR-HIRE		TOTAL	
Trucks & Combinations	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Single Unit Trucks						
2 axles	25,788,905	94.9	435,041	39.4	26,223,946	92.7
3 axles	720,709	2.5	50,792	4.6	771,501	2.6
All Single Unit Trucks	26,509,614	97.4	485,833	44.0	26,995,447	95.3
Combinations						
3 axles	106,963	0.4	80,604	7.3	187,567	0.7
4 axles	217,917	0.8	167,833	15.2	385,750	1.4
5 or more axles	373,293	1.4	369,896	33.5	743,189	2.6
All Combinations	698,173	2.6	618,333	56.0	1,316,506	4.7
Total	**27,207,787**	**100.0**	**1,104,166**	**100.0**	**28,311,953**	**100.0**

[1]Of the 27,207,787 private trucks, approximately 3,000,000 are farm trucks.

SOURCE: Based on vehicle distribution *Truck Inventory and Use survey, 1972 Census of Transportation,* U.S. Department of Commerce, Bureau of Census with adjustments to include pick-up and panel trucks.

Industry Growth

The number of regulated carriers remains high despite alleged claims that deregulation is needed to foster more competition in the trucking industry. In addition, the size of these carriers has grown as well. In 1978, over 1,000 carriers had revenues of $3 million or more. Yet the bulk of the regulated industry is composed of small business enterprises grossing less than $500 thousand a year. Most of these firms are family owned businesses with a few pieces of equipment, although located to provide the service to markets extending to every corner of the nation.

Distribution of Class I & II Motor Carriers by Number and Gross Revenue (Full Year 1977)

	Carriers	
	Numbers	Percent
Under $500,000[1]	51	1.9
500,000- 999,999	449	16.5
1,000,000-1,499,999	406	15.0
1,500,000-1,999,999	298	11.0
2,000,000-2,499,999	192	7.1
2,500,000-4,999,999	549	20.3
5,000,000-9,999,999	323	12.0
10,000,000 & above	437	16.2
Total	**2,701**	**100.0**

[1]Carriers filing as Class II even though their revenues for the year were below $500,000.

SOURCE: Research and Statistical Services Department

Number of Carriers by size class fiscal year

Year	Class I	Class II[1]	Class III[1]	Total
	$100,000 or more	$25,000 to $100,000	Under $25,000	
1945	2,001	18,871		20,872
1946	2,099	19,019		21,118
1947	2,211	18,787		20,998
1948	2,507	18,337		20,884
1949	2,728	17,334		20,062
	$200,000 or more	$50,000 to $200,000	Under $50,000	
1950	2,053	17,544		19,597
1951	2,178	17,542		19,720
1952	2,361	17,001		19,362
1953	2,576	16,338		18,914
1954	2,640	15,694		18,334
1955	2,834	15,298		18,141
1956	2,939	14,957		17,896
	$1,000,000 or more	$200,000 to $1,000,000	Under $200,000	
1957	933	2,055	14,779	17,767
1958	988	2,167	14,105	17,260
1959	1,009	2,256	14,383	17,648
1960	1,053	2,276	12,947	16,276
1961	1,106	2,336	12,556	15,998
1962	1,148	2,495	12,340	15,983
1963	1,175	2,533	11,910	15,618
1964	1,195	2,536	11,748	15,479
1965	1,250	2,615	11,700	15,565
1966	1,298	2,675	11,453	15,426
1967	1,389	2,789	11,238	15,396
	$1,000,000 or more	$300,000 to $1,000,000	Under $300,000	
1968	1,421	2,082	11,617	15,120
1969	1,503	1,998	11,706	15,207
1970	1,571	2,061	11,468	15,100
1971	1,597	2,169	11,351	15,117
1972	1,771	2,202	11,165	15,138
1973	1,738	2,026	11,380	15,144
	$3,000,000 or more	$500,000 to $3,000,000	Under $500,000	
1974	842	2,348	11,910	15,100
1975	885	2,670	12,450	16,005
1976	899	2,589	12,984	16,472
1977	1,052	3,101	12,453	16,606
1978	1,045	2,929	12,900	16,874

[1]Separate figures on Class II and Class III carriers not available prior to 1957.

SOURCE: Interstate Commerce Commission and *ICC Statement No. 589 and No. 6404 and ICC Activities 1937-62.*

Location

Each area in the country is served by numerous carriers, as illustrated in the state by state breakout of Class I and II carriers by ICC region.

California alone has 366 carriers domiciled there and Pennsylvania is second with 306 firms. Even our island state Hawaii is home to 8 carriers.

Some 84 percent of Class I and II carriers are common carriers while the rest serve only a specified number of shippers under ICC authority as contract carriers.

Location of Class I and II Carriers—1978

per geographical region as designated by the interstate commerce commission

	Common	Contract	Total
1. New England			
Connecticut	57	3	60
Maine	10	2	12
Massachusetts	97	17	114
New Hampshire	12	4	16
Rhode Island	15	3	18
Vermont	6	3	9
Total	**197**	**32**	**229**
2. Middle Atlantic			
Delaware	8	3	11
District of Columbia	7	0	7
Maryland	48	11	59
New Jersey	206	63	
New York	198	49	247
Pennsylvania	265	41	306
West Virginia	23	3	26
Total	**755**	**170**	**925**
3. Central			
Illinois	221	38	259
Indiana	109	19	128
Michigan (Lower Peninsula)	96	16	112
Ohio	182	55	237
Total	**608**	**128**	**736**
4. Southern			
Alabama	40	10	50
Florida	64	12	76
Georgia	52	10	62
Kentucky	40	3	43
Mississippi	22	2	24
North Carolina	88	9	97
South Carolina	28	5	33
Tennessee	70	4	74
Virginia	69	11	80
Total	**473**	**66**	**539**
5. Northwestern			
Michigan (Upper Peninsula)	6	1	7
Minnesota	73	18	91
North Dakota	4	1	5
South Dakota	13	4	17
Wisconsin	64	33	97
Total	**160**	**57**	**217**
6. Midwestern			
Iowa	59	19	78
Kansas	40	7	47
Missouri	96	13	109
Nebraska	53	18	71
Total	**248**	**57**	**305**
7. Southwestern			
Arkansas	26	7	33
Louisiana	31	8	39
Oklahoma	48	7	55
Texas	163	17	180
Total	**268**	**39**	**307**
8. Rocky Mountain			
Colorado	58	9	67
Idaho	12	1	13
Montana	20	4	24
New Mexico	9	2	11
Utah	31	9	40
Wyoming	10	2	12
Total	**140**	**27**	**167**
9. Pacific			
Alaska	10	0	10
Arizona	33	4	37
California	318	48	366
Hawaii	8	0	8
Nevada	7	0	7
Oregon	51	10	61
Washington	75	5	80
Total	**502**	**67**	**569**
Canada	11	4	15
Grand Total	**3,362**	**647**	**4,009**

SOURCE: Based on carriers filing quarterly reports with the Interstate Commerce Commission.

Equipment and Manpower

The data on annual ton-miles per power unit for Class I general freight carriers has been extracted from two sources as highlighted by the broken graph. For 1976 and 1977, the data were taken from ATA's *Motor Carrier Annual Report*. In the future, data will also be derived from this source to ensure its timeliness.

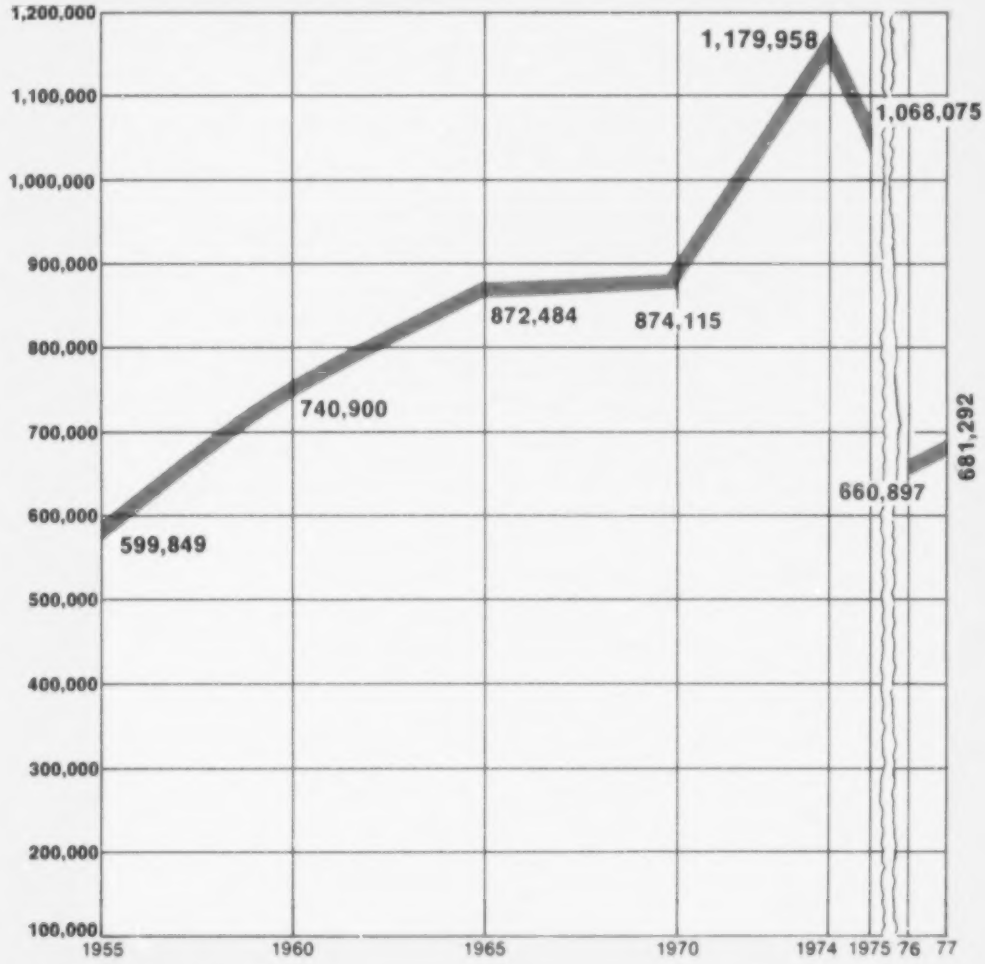
For the years prior to 1976, the data, while similarly sourced, should be used cautiously for comparative and trend analysis. This is due to the definitional changes made by the ICC in the revenue classification of Class I carriers.

Certainly, it can be said that Class I carriers have grown substantially since 1955 and annual ton-miles per power unit have increased as well. However, the extent of these gains is obscured by the data limitations discussed above. In 1977, annual ton-miles per power unit were 681,292 or a 3.1 percent increase over 1976.

Annual Ton Miles Per Power Unit

class I intercity common carriers of general freight

1955	599,849
1960	740,900
1965	872,484
1970	874,115
1972	862,924
1973	1,062,593
1974	1,179,958
1975	1,068,075
1976	660,897
1977	681,292

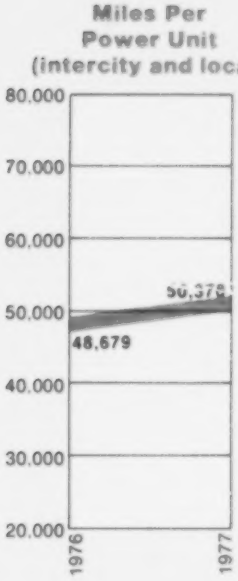


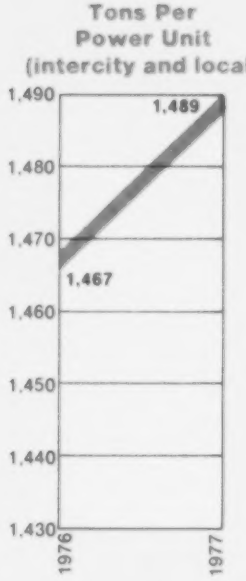
Source: Data from Interstate Commerce Commission, *Transport Statistics in the United States*, after 1975 *Motor Carrier Annual Report*, instruction 27 carriers, ATA.

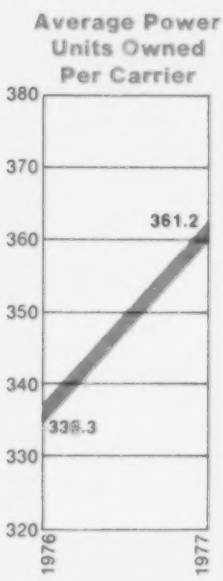
Equipment and Manpower

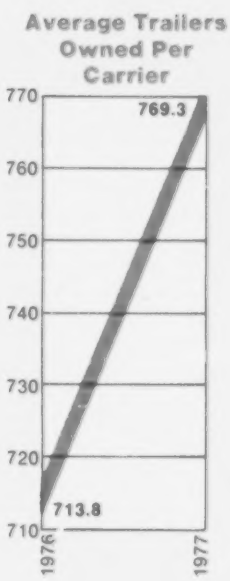
1977 miles per power unit and tons per power unit for Class I general freight carriers both showed increases over 1976 results with miles up 3.5 percent to 50,376 and tons up 1.5 percent to 1,489.

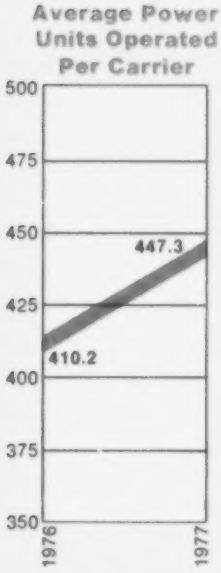
The number of power units operated by Class I carriers of general freight averaged 447 per carrier in 1977, a 9 percent gain over the 1976 level. Of this amount, the carriers owned 80.7 pe.cent and leased 19.3 percent of the equipment in 1977.

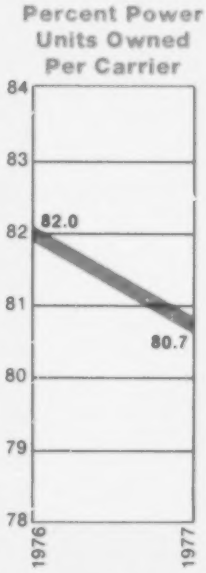


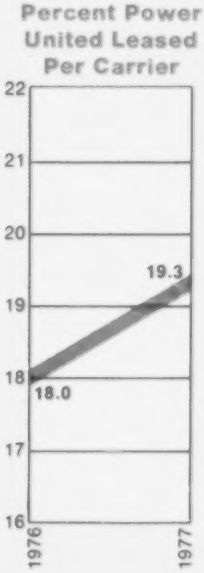


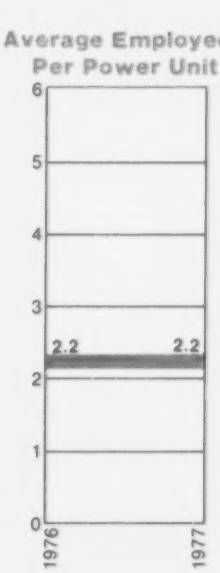


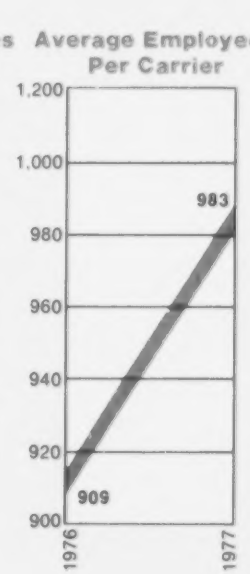












SOURCE: *1977 Motor Carrier Annual Report*, ATA.

ICC Regulated Firms

In 1978, the Interstate Commerce Commission regulated 19,365 firms or .8 percent increase over the 1977 total. Oil pipelines, formerly under the ICC's jurisdiction, are now under the Department of Energy.

Motor carriers of property comprised over 87 percent of ICC regulated firms both in 1977 and 1978 while year-to-year numerical changes showed the number of motor carriers increasing slightly from 1977 to 1978.

Firms Regulated By the Interstate Commerce Commission

	June 30, 1976	September 30,1977	September 30,1978
Motor Carriers of Property			
Class I (Annual Revenues over $3 Million)	899	1,052	1,045
Class II (Annual Revenues $500 Thousand to $3 Million)	2,589	3,101	2,929
Class III (Annual Revenues under $500 Thousand)	12,984	12,453	12,900
	16,472	**16,606**	**16,874**
Railroads			
Class I (Annual Revenues $5 Million or More 1976,$10 Million or More, 1977 and $50 Million or More, 1978)	65	59	42
Class II (Annual Revenues under $5 Million 1976,under $10 Million, 1977 and Between $10 Million and $50 Million, 1978)	267	272	64
Class III (Annual Revenues $10 Million and less)	—	—	275
	332	**331**	**321**
Railroad Switching and Terminal Companies			
Class I (Same Limits as Railroads)	26	22	1
Class II (Same Limits as Railroads)	128	141	37
Class III (Same Limits as Railroads)	—	—	134
	154	**163**	**172**
Motor Carriers of Passengers			
Class I (Annual Revenues $2 Million or More, 1976 and $3 Million or More 1977 and 1978)	121	69	62
Class II (Annual Revenues under $1 Million, 1976 and $3 million, 1977 and 1978)	1,020	1,094	1,114
	1,141	**1,163**	**1,176**
***Freight Forwarders**			
Annual Revenues of $100 Thousand or More	140	146	151
Annual Revenues Under $100 Thousand	26	25	29
	166	**171**	**180**
Water Carriers			
With Annual Revenues of $100 Thousand or More	81	80	81
With Annual Revenues Under $100 Thousand	104	100	100
	185	**180**	**181**
***Holding Companies**			
Rail	7	7	6
Water	1	2	2
Motor	70	73	76
	78	**82**	**84**
*Railroad Lessor Companies	123	102	99
*Carlines Companies (Which Furnish Cars For Use on Lines of Rails)	140	150	154
*Pipelines (oil) Effective 1978 regulated by the Department of Energy	108	117	—
Martime Carriers	7	8	6
Electric Railways	7	6	6
*Protective Service Companies	6	6	6
*Stockyard Companies	26	25	21
*Rate Bureaus and Organizations	99	101	85
GRAND TOTAL	**19,044**	**19,211**	**19,365**

*Regulated Non-Carriers ' Class II and III Motor Carriers of Passengers

INDUSTRY DEVELOPMENT

Brief Facts

- The 1979 cost of a new tractor is up over 108 percent from the price paid in 1973.
- Over 1.7 billion gallons of fuel have been saved by truck purchasers through the use of energy efficient components parts.
- Diesel engines, radial tires and variable fan drives in Class VI, VII and VIII trucks continue to gain in sales.
- The average factory value of a truck trailer was $9,939 in 1977 with preliminary estimates in 1978 of $10,427.
- The cost of motor carrier transportation has risen much less rapidly than either the Consumer Price Index or the Producer Price Index from 1967 through 1978.
- An estimated 174,800,000 gallons of fuel could be saved annually if the states not permitting twin trailers were to allow such units on their highways.

Other Sources of Information for Industry Developments:

Commercial Motor Transportation
Charles A. Taff, Ph.D.
Professor of Transportation
College of Business & Management
University of Maryland
College Park, Maryland 20741

Accident Facts 1979 Edition
National Safety Council
444 N. Michigan Avenue
Chicago, Illinois 60611

Truck Energy Data
Truck Taxes by State
Interstate Information Report
American Trucking Associations, Inc.
1616 P Street, Northwest
Washington, D.C. 20036

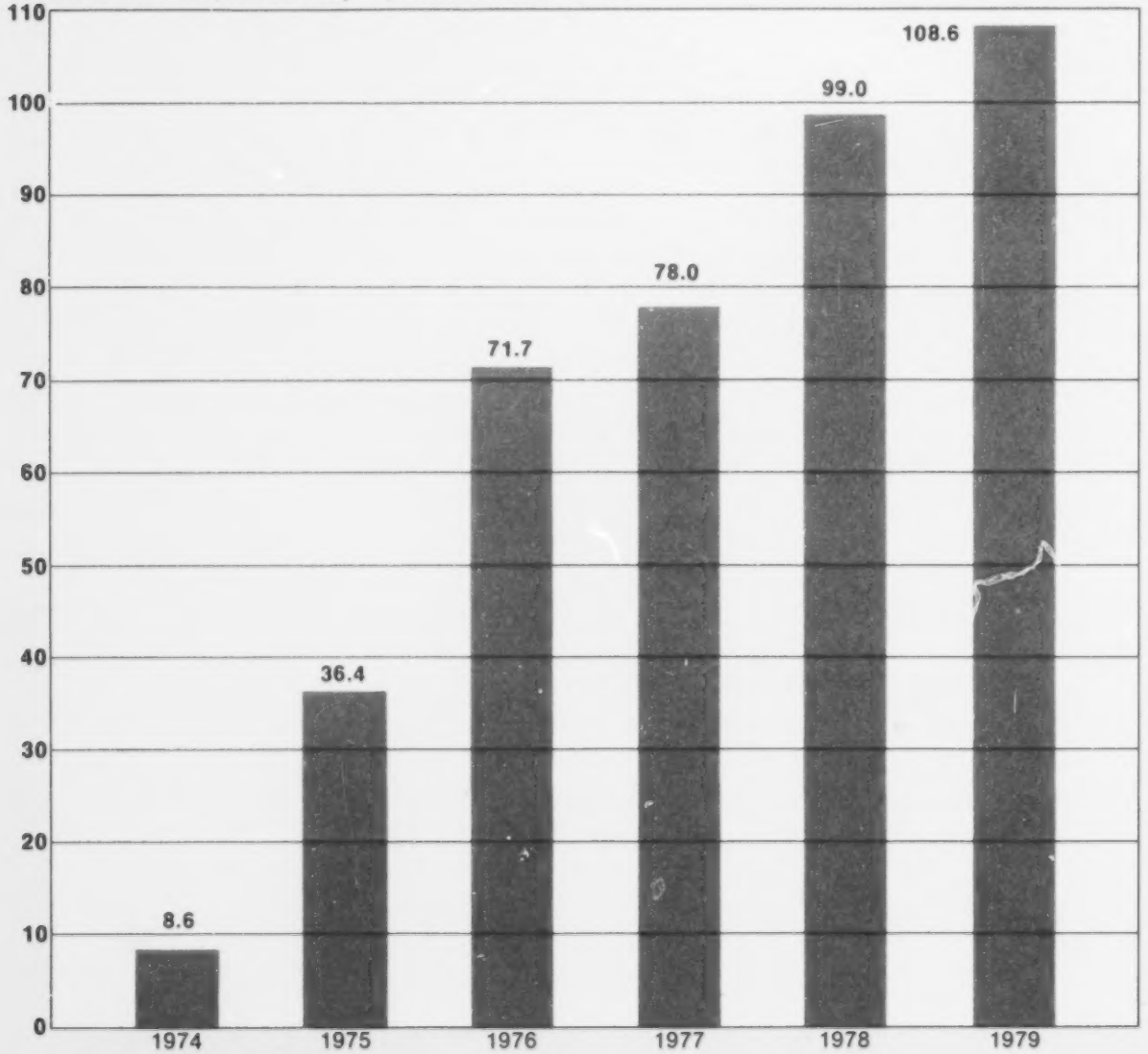
Equipment Costs

The price of a new tractor has increased substantially since 1973, or almost 109 percent. A "basic" conventional twin screw tractor without a sleeper compartment costs over $41,000 in 1979 and this price does not include interest payments, title cost or taxes. Further, the purchase of a "top of the line" tractor including sleeper cab and optional equipment will add many thousands of dollars to the purchase cost.

Dollar figures have not been included with this chart due to the fact that fleet equipment purchases as well as engine and parts specifications by the buyers can affect the price of a "basic" truck. Percentage changes, over time, provide valid data on the identification of an important cost factor associated with the trucking industry.

Percent Increase In Cost Of A Tractor (1973 = 100)

conventional, non-sleeper, twin-screw tractor



SOURCE: Department of Engineering, ATA.

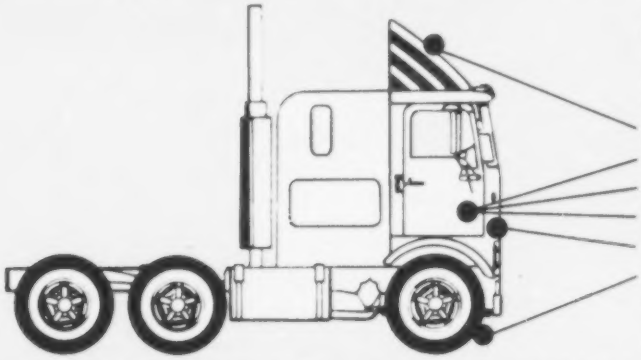
Trucks Save Fuel

Since 1973 fuel savings by operators of newly purchased commercial vehicles have amounted to over 1.7 billion gallons. This has been achieved through the use of such fuel efficient components as variable fan drives, aerodynamic devices and radial tires. A shift to the more efficient diesel engine added greatly to the conservation effort.

The amounts do not reflect any fuel savings achieved from the installation of similar devices on older trucks nor do they include such additional measures as lower vehicle speeds, improved maintenance practices and routing and scheduling methods used by motor carriers.

The 1.7 billion gallons of fuel saved over this five year period is an amount equal to that which would have been required to heat the homes of over 858,000 average Americans over a similar period.

Voluntary Truck and Bus Fuel Economy Programs—Fuel Savings For 1977

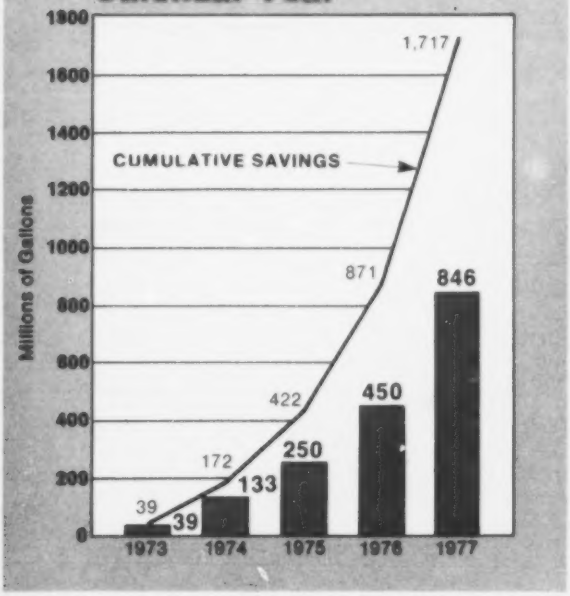


Components	Gallons In Millions	Percent
Aerodynamic Devices	49	6
Medium Duty Diesels	32	4
Fuel Efficient Diesels	288	33
Class VII-VIII Dieselization	78	9
Variable Fan Devices	206	24
Radial Tires	204	24
Total	**857**	**100**

SOURCE: The Joint Industry-Government Voluntary Truck and Bus Fuel Economy Improvement Program.

The Voluntary Truck and Bus Fuel Economy program involves vehicle users, engine and vehicle manufacturers, unions, trade associations and the Department of Transportation. The program has resulted in a cumulative fuel savings of 857 million gallons.

Fuel Savings By Calendar Year



Average Fuel Saving Fuel-Efficient Components Used in This Report

Type	Class III-VI 10,001-26,000 lbs.	Class VII 26,001-33,000 lbs.	Class VIII >33,000 lbs.
Variable Fan Drives	2%	6%	6%
Aerodynamic Devices	2%	6%	6%
Radial Tires	4%	6%	6%
Diesel vs. Gasoline Engines	35%	35%	35%
Fuel-Efficient Diesels	—	7%	7%

Trucks Save Fuel

Fuel efficient options have been increasing in popularity in recent years as efforts to hold the line on energy costs continue.

In Class VI, VII and VIII trucks, diesel engines are used more now than ever before. For the first nine months of 1978, 8.5 percent of Class VI trucks sold and 54.8 percent of Class VII trucks sold were equipped with diesel engines. Meanwhile, Class VIII trucks continue to be predominantly dieselized.

Over one quarter of Class VIII trucks sold during the first three quarters of 1978 were sold with radial tires, an increase over the levels of earlier years.

Fuel Efficient Option Sales

	Model Year					
Vehicle Classes	1973	1974	1975	1976	1977	1978 (9 mo)
III-VI (10,000-26,000 lbs GVWR):						
All Trucks Sold	304,704	268,361	312,535	222,979	214,380	154,379
% Diesels	1.7	1.6	2.7	3.5	6.8	8.5
% Radials	.09	.06	.28	1.2	4.3	4.0
% Variable Fan Drive	19.5	8.8	14.0	21.1	19.3	46.0
VII (26,001-33,000 lbs GVWR):						
All Trucks Sold	43,589	37,282	30,942	28,499	36,700	33,588
% Diesels	37.3	38.5	42.0	37.7	51.5	54.8
% Radials	.64	1.3	3.3	7.3	10.6	9.6
%Variable Fan Drive	1.8	4.8	7.9	10.7	16.0	50.7
VIII (Over 33,000 lbs GVWR):						
All Trucks Sold	176,358	186,597	105,240	122,528	170,433	138,815
% Diesels	82.3	83.0	81.9	86.6	89.0	88.7
% Fuel Economy Diesels	15.4	18.2	28.6	30.5	50.1	60.4
% Aerodynamic Devices	.8	1.1	3.2	13.0	11.2	13.7
% Radials	3.2	3.8	7.8	24.0	23.2	28.4
%Variable Fan Drive	4.0	3.8	24.0	39.1	47.7	76.0

SOURCE: *Fuel Economy News*, Voluntary Truck and Bus Fuel Economy Program, U.S. Department of Transportation.

Petroleum Consumption

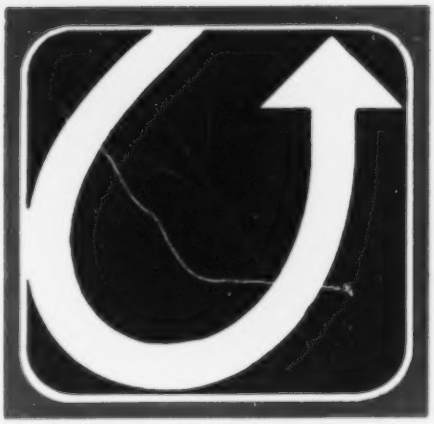
U.S. petroleum consumption continues on the rise through 1977 estimates, the latest figures available. Under a very broad heading which encompasses all the modes including bunkers, military transportation and all military use of distillate and residual fuel oils, transportation represented 53.8% of petroleum and petroleum products consumption in 1977.

Motor carriers recognize the importance of conserving this important resource and have developed and utilized many fuel conserving features for trucks to improve their efficiency. These include demand-actuated fan clutches, radial tires, wind deflectors (air shields) and truck engine modifications.

U.S. Petroleum[1] Consumption by Consuming Sector, 1950-1977

	TOTAL NET INPUT		PERCENT OF TOTAL*			
Year	Trillion Btu	Million Barrels	Transportation[2]	Household/ Commercial	Industrial	Electrical Generation/ Other
1950	13,488	2,375	50.3	22.5	19.8	7.4
1955	17,524	3,100	52.0	22.8	19.4	5.8
1960	20,067	3,611	51.7	24.5	18.3	5.4
1965	23,241	4,202	52.4	24.2	17.8	5.5
1970	29,537	5,365	52.7	21.8	17.8	7.8
1971	30,570	5,553	53.3	21.1	16.7	9.0
1972	32,966	5,990	52.4	20.2	17.2	10.2
1973	34,851	6,317	52.1	19.2	17.4	11.3
1974	33,414	6,070	53.0	18.1	17.7	11.2
1975	32,701	5,954	54.6	17.8	17.2	10.3
1976e	34,938	6,350	53.6	18.1	17.6	10.6
1977e	37,173	6,727	53.8	16.1	20.5	9.6

[1]All petroleum products refined and processed from crude oil, including liquified refinery gas and natural gas liquids.
[2]All modes including bunkers, military transportation, and all military use of distillate and residual fuel oils.
SOURCE: Bureau of Mines, U.S. Department of Interior, 1950-1976, Department of Energy, 1977.
e-estimated.
*Percents may not add to 100.0 due to rounding.



Highway Travel and Safety

Up through 1975, states reported vehicle speed for certain vehicle types. This was particularly relevant before the implementation of the national 55 miles per hour speed limit on January 2, 1974, when trucks and buses were often restricted to lower speed limits than passenger cars. In 1973, for example, the speed difference showed trucks travelling generally 5 mph slower than other vehicles. With a uniform speed limit for all vehicles in 1974, the difference between vehicles decreased, but trucks still maintained slower speeds in both 1974 and 1975.

For 1975, speeds for trucks can be compared to that of passenger cars and buses by type of road.

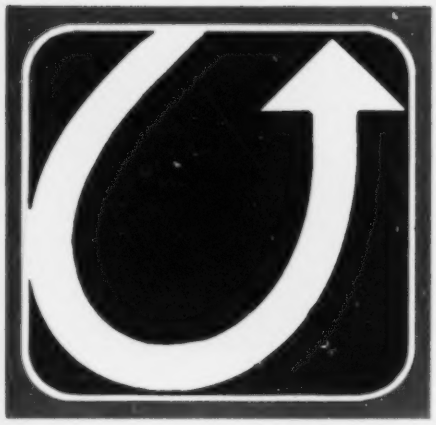
Average Speeds of Free-Moving Vehicles by Type of Highway in 1975

States	Type of Highway	Average Speed M.P.H.			
		All	Passenger Car	Truck	Bus
28	Main Rural	55.8	56.2	54.8	55.4
28	Rural Interstate Completed	57.6	58.0	56.6	57.4
3	Rural I.S. Traveled-Way (1)	57.8	58.3	56.7	57.2
29	Rural Primary	54.6	55.1	53.4	54.2
15	Urban Interstate Completed	54.7	55.2	53.8	54.1
2	Suburban Interstate Completed	55.9	56.6	54.4	56.1
	FREEWAYS AND TOLL ROADS:				
	Connecticut Parkways	59.9	59.9	N/A	N/A
	Connecticut Turnpike	58.1	58.3	57.5	57.7
	Michigan Freeways	58.3	59.0	55.2	61.4
	Nevada Freeways	57.3	57.2	57.6	N/A
	New Hampshire Turnpike	59.2	59.2	60.0	52.7
	Oregon Freeways	55.1	55.5	54.3	N/A
	Pennsylvania Freeways	51.9	52.9	50.2	53.3
	Rhode Island Freeways (Rural)	54.9	55.1	53.8	55.2
	Rhode Island Freeways (Urban)	50.5	50.7	49.7	53.7
	Texas—Ft. Worth—Dallas Tpk.	52.4	52.7	50.6	52.4
	Texas-Stemmons Freeway	55.2	55.5	54.3	53.4
15	Rural Secondary	51.7	52.0	50.1	50.7
13	Urban Primary	42.6	42.9	42.0	43.3
3	Urban Secondary	39.4	39.5	39.0	38.7
5	Suburban Primary	48.4	49.0	46.6	46.7

[1]Rural interstate traveled-way includes roads, and urban interstate traveled-way includes streets that are adequate for present traffic but have not been upgraded to full unterstate design standards, and those older sections of existing roads and streets that are presently serving the interstate traffic in interstate corridors.

N/A-Data not available.

SOURCE: *55 MPH Fact Book*, U.S. Department of Transportation, National Highway Traffic Safety Administration.



After 1975, there is generally only a single speed figure available, which applies to all vehicle types. A recent (1978) survey in 25 states by the Department of Transportation found that the speed of trucks and of other vehicles had risen to 58.3 mph.

A critical aspect of speed of travel is on highway safety—accidents, and especially fatalities. All vehicle fatalities, including motor carriers, fell dramatically in 1974 from 1973. Regrettably, as vehicle speeds and traffic have increased in recent years, so too have fatalities. Nationally, fatalities have increased from 46,000 in 1975 to 49,500 in 1977 according to the National Safety Council. Fatalities in truck related accidents, as reported to the Bureau of Motor Carrier Safety, have risen from 2,429 in 1974 to 2,983 in 1977, which represents 6% of the fatalities nationally. Yet the number of fatalities is still less than the 1973, pre-55 figure.

Generally, the trucking industry has a better safety record than other highway users. National Safety Council (NSC) data for 1977 (*Accident Facts*, 1978 Edition) shows that trucks are 19.6% of the vehicles registered and 15.7% of the vehicles in accidents. Passenger cars, in comparison, are 76.5% of the vehicles registered and 79.9% of the vehicles in accidents.

For truck combination units specifically, these are 0.8% of the registrations and 3.1% of the vehicles in accidents. However, these vehicles have less accidents than would be expected since they account for 4.3% of the total vehicle mileage, according to the Federal Highway Administration.

The accident rate for all vehicles, according to 1977 NSC data is 12.01 per million miles while for truck fleets competing in the NSC National Fleet Safety Contest, the accident rate is 7.79.

Although the foregoing data, based on vehicle registrations and vehicle miles of exposure, show that trucks have a better safety record than other vehicles, ATA believes that the method of measuring exposure to accidents needs to be improved. As commercial vehicles, trucks are exposed to many accident causative factors to a greater extent than other vehicles. Such exposure must be taken into consideration when measuring accident experience of trucks in comparison with other vehicles. For example, truck operations are fairly constant in winter and summer, good weather and bad, whereas car mileage is usually high in summer and low in winter. Additional factors which must be considered are exposure of truck drivers to inexperienced drivers, drinking drivers, reduced visibility of night driving, etc.

An improved measure of exposure will result in a better measure of accident experience of all vehicles, including trucks.

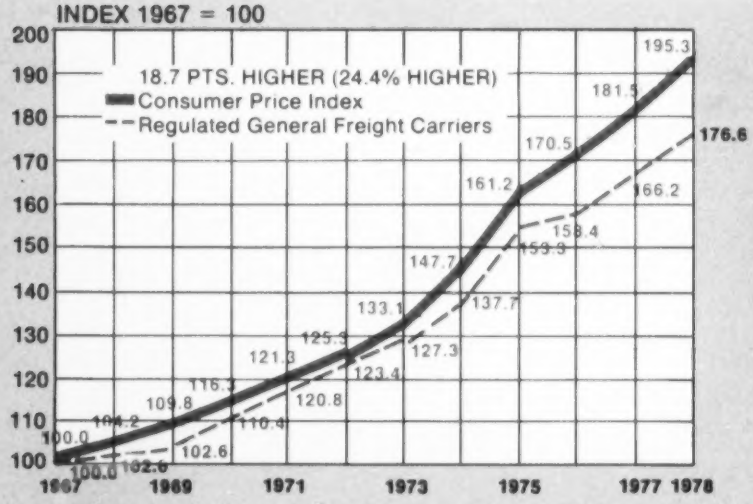
Trailer Shipments

The table on trailer shipments has been compiled from information available from the Truck Trailer Manufacturers Association. About 70.8 thousand vans shipped, or around 44%, are the type which are used by general freight carriers. These trailers had an average factory value of $8,196, significantly less than the cost of trailers used by some of the specialized carriers. For example, tank truck carriers and bulk commodity haulers use trailers whose average factory value is about $20 thousand, and therefore, their equipment costs can run much higher than those of other carrier types.

1977 Trailer Shipments and Average Values

	NUMBER	AVERAGE FACTORY VALUE
Insulated Refrigerated Vans	15,868	$14,093
Semi-Insulated Non-Refrigerated Vans	2,618	9,311
Drop Frame Vans	4,836	10,564
Livestock Vans	1,554	16,042
Other Closed Top Vans (Gen'l. Freight)	70,841	8,196
Open Top Vans	4,275	9,717
Tanks	8,766	19,553
Bulk Commodity & Dry Material	1,788	19,704
Pole & Logging	1,504	9,090
Platform	24,533	6,780
Low Bed Heavy Haulers	5,101	13,865
Dumps	7,863	8,649
Auto Transport	2,461	15,976
All Other Types	2,611	8,311
Totals 1977r	**159,598**	**$ 9,939**
Totals 1978p	**193,248**	**$10,427**

SOURCE: Truck Trailer Manufacturers Association.

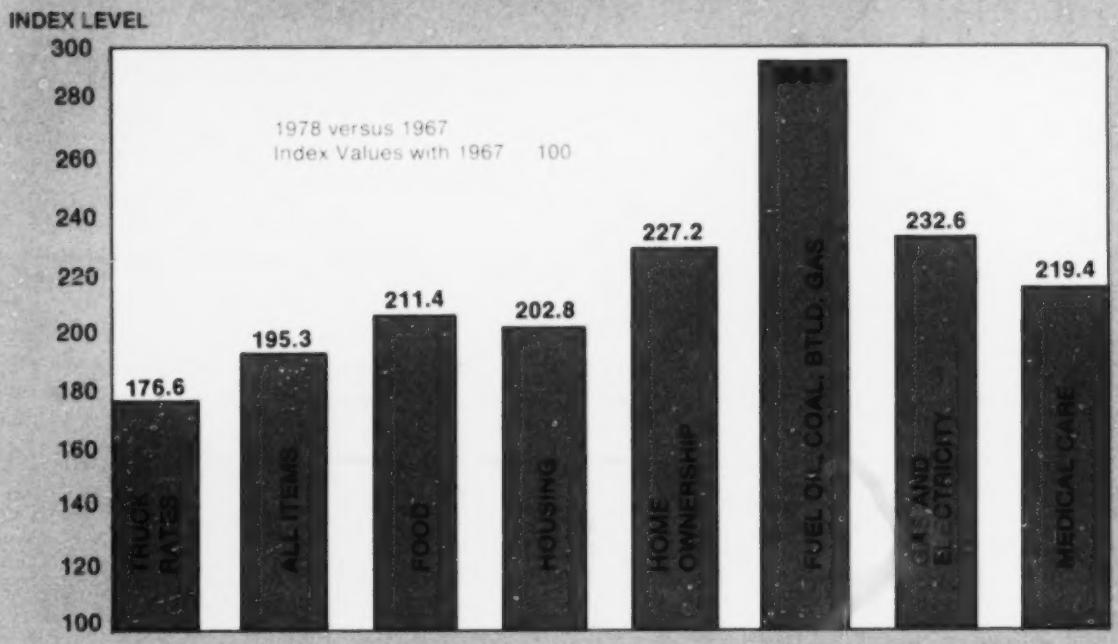


SOURCE: *Consumer Price Index Report*, Bureau of Labor Statistics and *Financial & Operating Statistics*, ATA.

Transportation Charges

In comparison with the Consumer Price Index, the percentage increase in trucking charges for regulated Class I and II general freight carriers has been 24.4% less. From 1967 through 1978, the CPI has risen from 100 to 195.3 while during the same period the price of regulated motor carrier service has gone from 100 to 176.6.

Changes in Truck Rates[1] as Compared to Changes in Various Consumer Items



[1]As measured by revenue per ton mile for ICC regulated intercity common carriers of general freight.
SOURCE: *Consumer Price Index Report*, Bureau of Labor Statistics and *Financial & Operating Statistics*, ATA.

	GENERAL FREIGHT CARRIERS		PRODUCER PRICE INDEX (FORMERLY WHOLESALE PRICE INDEX)
Year	Rev/Ton Miles	Rev/Ton Miles Index	All Items
1967	7.7¢	100.0	100.0
1968	7.9	102.6	102.5
1969	7.9	102.6	106.5
1970	8.5	110.4	110.4
1971	9.3	120.8	114.0
1972	9.5	123.4	119.1
1973	9.8	127.3	134.7
1974	10.6	137.7	160.1
1975	11.8	153.3	174.9
1976	12.2	158.4	183.0
1977	12.8	166.2	194.2
1978	13.6	176.6	209.3

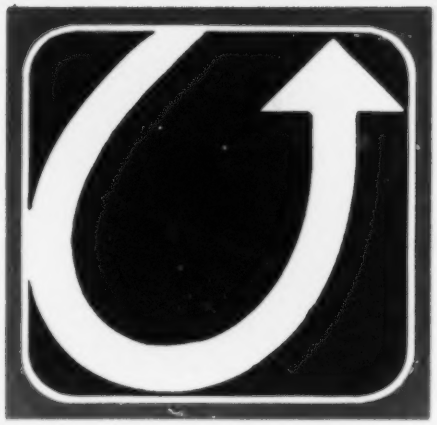
SOURCE: *Consumer Price Index Report;* Bureau of Labor Statistics and *Financial & Operating Statistics*, ATA.

Rate Change Data

The consumer knows that utility costs, medical costs, food and housing have all increased significantly in recent years, but may be surprised to learn that the cost of motor carrier service has risen much less rapidly. Of note, too, is the fact that shippers consider the service provided by motor carriers to be good service.

From 1967 through 1978, the Consumer Price Index rose 95.3% with many of its component factors escalating at an even faster pace. In comparison, the cost of motor carrier transportation, based on revenues per ton-mile, went up only 76.6%.

From 1972 through 1978, the Producer Price Index rose 75.7% while the cost of motor carrier transportation, based on revenues per ton-mile, went up only 43.1%.



Possible Fuel Savings

Whether the freight is light and bulky or dense, the possible savings in truck trips and fuel consumed through the use of longer trailers and increased weight limits are considerable. By substituting 65 foot twin trailers for 45 foot semitrailers at a higher twins weight limit, there could be a fuel savings of 18.9% and 23.7% savings in truck trips on loads of light and bulky freight.

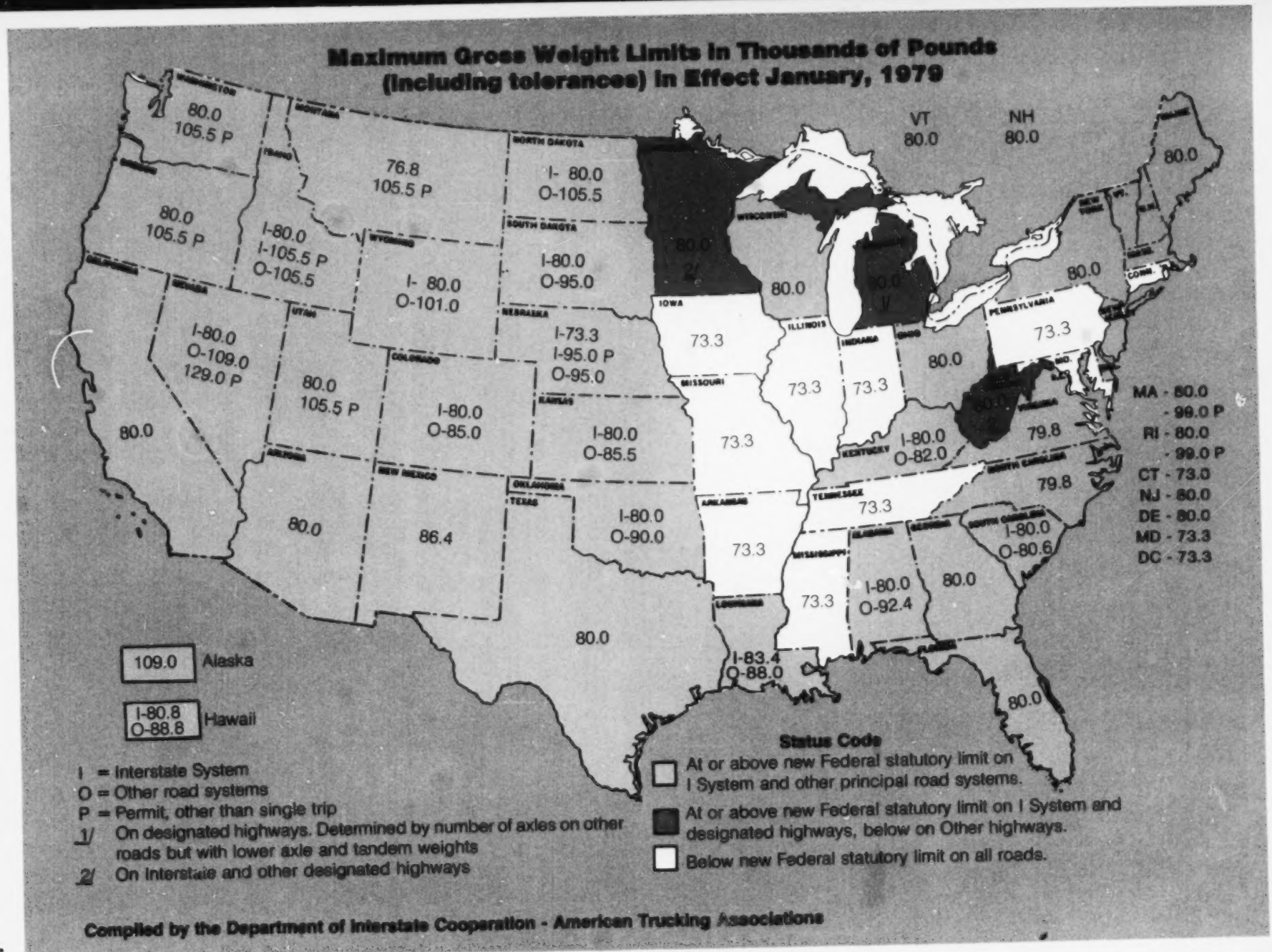
There are now 40 states at or near the Federal maximum weight limits on the Interstate System. But, as the map on the opposite page illustrates, these states form an effective block to cross country movements. Further, Pennsylvania and Maryland inhibit East Coast efficiencies.

Possible Percentage Savings in Truck Trips and Fuel Consumed in Hauling One Million Tons of Highway Freight in Various Truck Combinations

	Percent of Truck Trips Saved	Percent of Fuel Saved
Light and Bulky Freight		
Substitute 45 foot for 40 foot Semitrailers	14.4%	8.5%
Substitute 65 foot Twin Trailers for 40 foot Semitrailers		
—At old Twin Trailer Weight Limit	27.2%	22.0%
—At new Twin Trailer Weight Limit	32.4%	25.9%
Substitute 65 foot twin trailers for 45 foot Semitrailers		
—At old Twin Trailer Weight Limit	17.8%	14.7%
—At new Twin Trailer Weight Limit	23.7%	18.9%
Dense Freight		
Substitute new for old Weight Limits		
—With 40 foot Semitrailers	11.3%	7.7%
—With 45 foot Semitrailers	11.4%	7.8%
—With 65 foot Twin Trailers	13.2%	9.1%
Substitute 65 foot Twin Trailers at new Limit for		
—40 foot Semitrailer at old Limit	12.1%	9.0%
—45 foot Semitrailer at old Limit	12.9%	9.8%

(Legal or Maximum Practical)	Old Limit	New Limit
Light and Bulky Freight		
40 foot Semitrailer	60,725	60,725
45 foot Semitrailer	65,250	65,250
65 foot Twin Trailer	73,280	76,677
Dense Freight		
40 foot Semitrailer	73,280	79,000
45 foot Semitrailer	73,280	79,000
65 foot Twin Trailer	73,280	80,000

SOURCE: Department of Economics and Planning, ATA.


Maximum Gross Weight Limits in Thousands of Pounds
(Including tolerances) in Effect January, 1979
80.0
105.5 P
76.8
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I- 80.0
O-105.5
80.0
105.5 P
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I-105.5 P
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79.8
73.3
I-80.0
O-80.6
80.0
I-80.0
O-92.4
80.0
MA - 80.0
- 99.0 P
RI - 80.0
- 99.0 P
CT - 73.0
NJ - 80.0
DE - 80.0
MD - 73.3
DC - 73.3
109.0 Alaska
I-80.8
O-88.8 Hawaii
I = Interstate System
O = Other road systems
P = Permit, other than single trip
1/ On designated highways. Determined by number of axles on other roads but with lower axle and tandem weights
2/ On Interstate and other designated highways
Status Code
At or above new Federal statutory limit on I System and other principal road systems.
At or above new Federal statutory limit on I System and designated highways, below on Other highways.
Below new Federal statutory limit on all roads.
Compiled by the Department of Interstate Cooperation - American Trucking Associations

Possible Fuel Savings

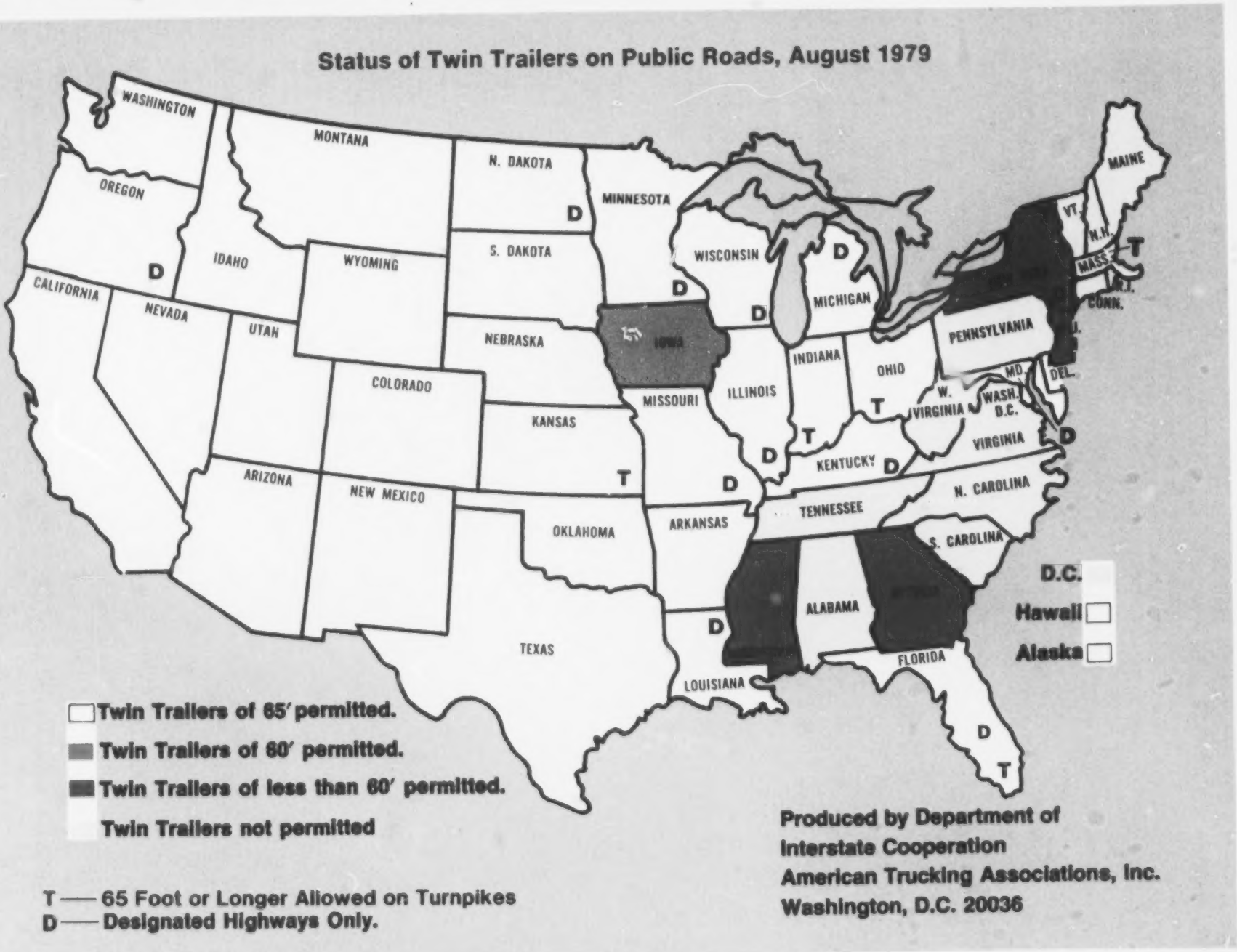
Twin trailers, without question, represent the most modern, efficient means of moving goods. By providing increased loading space for light and bulky commodities, significant fuel economies can be achieved. In a study conducted for the Department of Energy by the Stanford Research Institute, it is estimated that 174,800,000 gallons of fuel could be saved annually if those states not permitting twin trailers were to allow such units on their highways.

Studies by state and Federal agencies have verified the safety of these combinations when compared with other vehicles on the highways. Twins track and turn better than many other types of trucks and they have stopping ability which is, at least, comparable to other combinations.

Fuel Savings Possible in States Not Permitting Gross Vehicle Weight of 80,000 lbs. or Twin Trailers

State	Possible Gallons Saved By		Total
	Increased Weight	Use of Twin Trailers	
Alabama	0	12,100,000	12,100,000
Arkansas	1,300,000	0	1,300,000
Connecticut	2,200,000	7,900,000	10,100,000
Georgia	0	17,900,000	17,900,000
Illinois	5,800,000	0	5,800,000
Indiana	7,100,000	0	7,100,000
Iowa	4,400,000	0	4,400,000
Maine	0	2,600,000	2,600,000
Maryland	6,900,000	0	6,900,000
Massachusetts	0	6,600,000	6,600,000
Mississippi	2,600,000	6,800,000	9,400,000
Missouri	2,700,000	0	2,700,000
New Hampshire	0	1,100,000	1,100,000
New Jersey	0	9,700,000	9,700,000
New York	0	13,300,000	13,300,000
North Carolina	0	16,400,000	16,400,000
Pennsylvania	10,400,000	20,000,000	30,400,000
Rhode Island	0	2,900,000	2,900,000
South Carolina	0	7,400,000	7,400,000
Tennessee	6,900,000	14,900,000	21,800,000
Vermont	0	1,000,000	1,000,000
Virginia	0	12,300,000	12,300,000
West Virginia	0	2,500,000	2,500,000
TOTAL	**50,300,000**	**155,400,000**	**205,700,000**

SOURCE: Based on energy savings stated in BTU's in a 1976 Stanford Research Study for the Department of Energy and converted to gallons at the rate of 136,000 BTU's per gallon of diesel fuel. Revised, August 1979.


Status of Twin Trailers on Public Roads, August 1979
WASHINGTON
OREGON
D
CALIFORNIA
NEVADA
IDAHO
MONTANA
WYOMING
UTAH
COLORADO
ARIZONA
NEW MEXICO
N. DAKOTA
D
S. DAKOTA
NEBRASKA
KANSAS
T
OKLAHOMA
TEXAS
MINNESOTA
D
IOWA
MISSOURI
D
ARKANSAS
D
LOUISIANA
WISCONSIN
D
ILLINOIS
D
MICHIGAN
D
INDIANA
T
OHIO
T
KENTUCKY
D
TENNESSEE
MISSISSIPPI
ALABAMA
GEORGIA
D
FLORIDA
D
T
S. CAROLINA
N. CAROLINA
VIRGINIA
D
W. VIRGINIA
PENNSYLVANIA
MD.
WASH. D.C.
DEL.
N.J.
CONN.
R.I.
MASS.
T
VT.
N.H.
MAINE
D.C.
Hawaii
Alaska
Twin Trailers of 65′ permitted.
Twin Trailers of 60′ permitted.
Twin Trailers of less than 60′ permitted.
Twin Trailers not permitted
T — 65 Foot or Longer Allowed on Turnpikes
D — Designated Highways Only.
Produced by Department of
Interstate Cooperation
American Trucking Associations, Inc.
Washington, D.C. 20036

Distribution Management

In recent years, the increasing efficiency and flexibility of highway freight transportation, and the almost parallel decline in rail efficiency, has profoundly affected shippers' views of transportation costs. Traditionally, transportation costs were directly compared on a strictly modal basis—for example, the cost of shipping by truck or rail for a given movement of freight.

Now, however, the concept of physical distribution management has provided additional, more sophisticated tools for the industrial traffic manager. Total corporate costs are compared rather than simply freight rates per se. Thus, the door-to-door, high speed, low loss, scheduled service of motor carriers has been found to result in lower total distribution costs than those associated with the slower, high minimum quantity, rail movements—even though truck rates are usually higher than are rail for the basic intercity portion of the freight movement.

The ability of trucks to serve all small towns and small shippers with small amounts of goods on short notice has resulted in lower business inventories, less "stock-outs," less lost sales through such stock-outs, reduced spoilage and damage, fresher merchandise and an improved corporate cash flow position. Manufacturers and merchants have found it more economical to be able to obtain the amount of goods when and where they want them than to pay what might superficially appear to be the lowest direct transportation price.

Modern Motor Carrier Management Systems

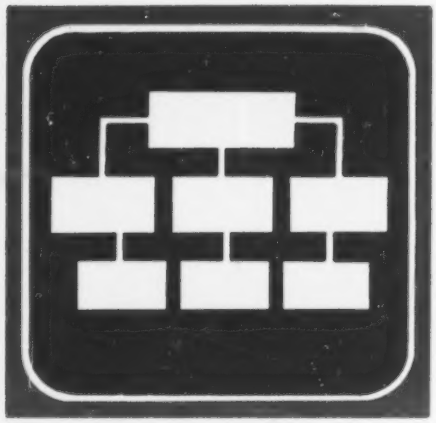
The regulated motor carrier industry uses modern management technology to support prompt, safe, economical freight transportation services. Computer-based, electronic data communications and information systems are evidence of a forward-looking, fast-acting capability to respond to competition and to seize opportunities for innovation and improvement.

The motor carrier management systems picture is a fluid one, as advances in electronic data systems knowledge, equipment, and services lead to frequent upgrading and expansion of systems scope and capacity. Current ATA records identify more than nine hundred motor carriers using one or more computers, including almost all Class I carriers. Growing numbers of Class II carriers are finding minicomputers economically and operationally suited to their management systems requirements.

Motor carrier computer systems have record-keeping and reporting applications well in hand. The thrust of systems development has shifted to the control of vehicles, drivers, and shipments which are dynamically, rather than historically, oriented. The following table presents the continuing progress of computer systems in a number of typical motor carrier applications.

Although the present industry-wide extent of the computer applications at the lower end of this list is less than for the traditional accounting applications listed first, the proportionate increases over the period of approximately ten years are greater. This indicates the current emphasis in the industry on developing advanced computer systems to assist in the management of uniquely transportation-related functions. Many of these systems operate online to the computer, a further indication of systems progress. The interorganizational, computer-to-computer exchange of shipment and other data between motor carriers and customers, government agencies, rate bureaus, and other carriers is becoming another field of systems innovation and development.

	Percent of Responding Motor Carrier Computer Users Reporting Applications Listed			Percent of Online Systems
APPLICATION	1966	1973	1977	1977
Freight Collections	69	77	90	18
General Ledger	44	57	83	12
Accounts Payable	64	65	79	13
Fuel and Mileage Records	66	64	76	18
Accounts Receivable	53	68	73	14
Interline Accounts	56	63	72	12
Freight Billing	28	40	67	34
Claims Registration	35	48	54	9
Equipment Control	29	29	40	21
Freight Rate Retrieval	4	13	28	51
Shipment Tracing	6	14	26	65
Maintenance Scheduling	5	15	24	32



STRUCTURE OF THE INDUSTRY

Brief Facts

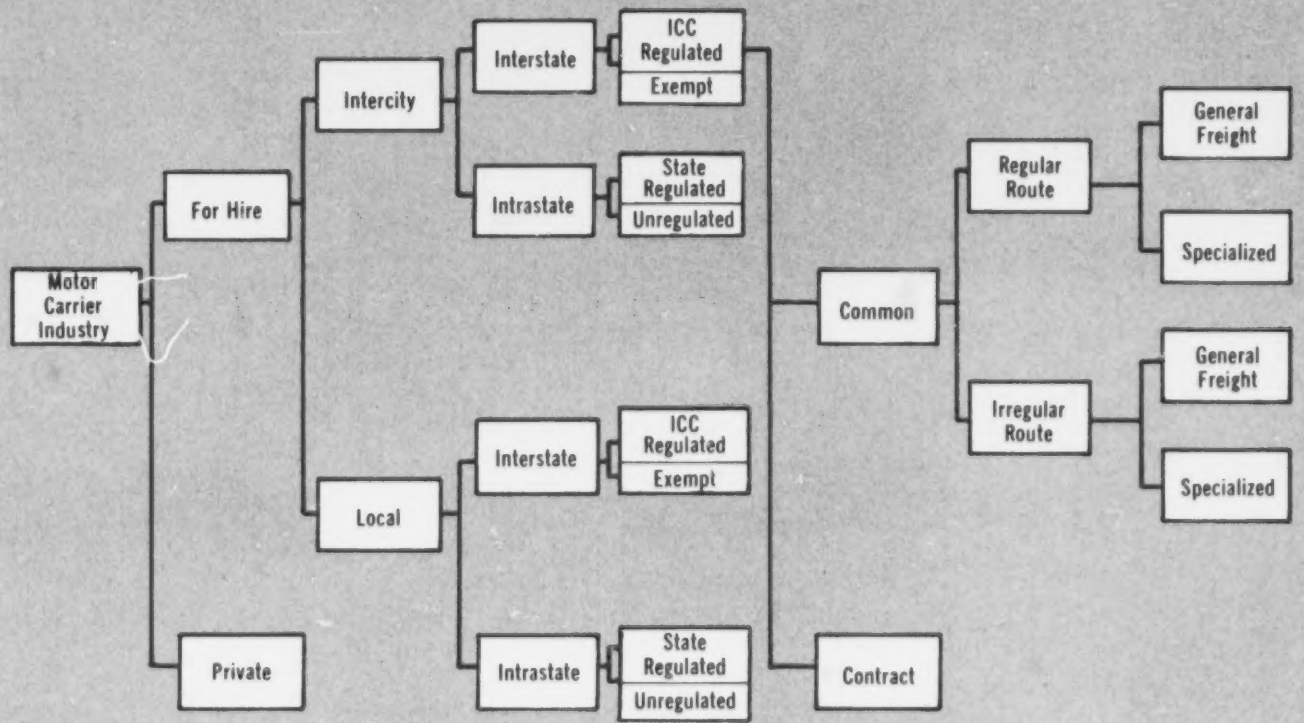
- For-hire motor carriers may be classified as common, contract or exempt carriers. Jurisdictional distinctions are interstate, intrastate and local.
- Private carriage involves the transportation of a firm's own goods and supplies in their own trucks.
- An independent trucker is one who does not hold a certificate or permit, otherwise known as operating rights, from the ICC.
- The number of publicly traded motor carriers is small, yet in 1978 these 45 companies had consolidated revenues of close to $9.9 billion.

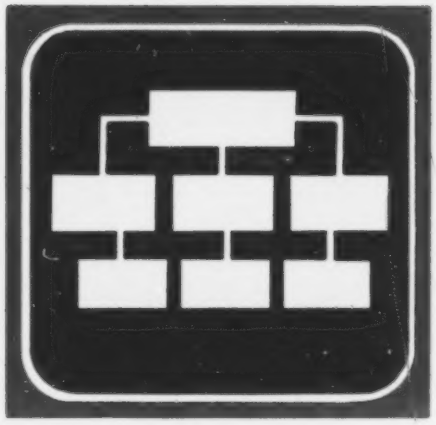
Other Sources for Structure of the Industry

Commercial Motor Transportation
Charles A. Taff, Ph.D.
College of Business and Management
University of Maryland
College Park, Maryland

Domestic Transportation, Practice, Theory, and Policy
Roy J. Sampson
Professor of Transportation, University of Oregon
Martin T. Farris
Professor of Transportation,
Arizona State University

Legal Structure of the Motor Carrier Industry





Structure of the Motor Carrier Industry

The trucking industry consists generally of two major groups, for-hire and private.

For-hire carriers transport freight which belongs to others. They may be classified by jurisdiction served such as interstate, intrastate and local, the latter two being regulated by state and local authorities. Most intercity trucking and even some local operators involves interstate commerce, and as a result, comes under Federal regulation by the Interstate Commerce Commission (ICC). In addition to jurisdiction districts, for-hire carriers are also classified by type—common carriers, contract carriers and exempt carriers.

Private carriers transport a significant portion of the Nation's intercity highway freight. Private carriers are defined as firms which transport their own goods and supplies in their own trucks.Since private carriers do not charge for their transportation services, they are exempted from both Federal and state economic regulation—though they are subject to all applicable safety and taxation regulations and statutes.

While vehicles operated by private carriers represent the majority of the trucks operating in intercity highway freight service, they normally differ from for-hire trucks in several significant ways. Compared with the intercity for-hire truck, the privately owned intercity truck usually has a shorter average length of haul, operates fewer annual miles, and carries almost exclusively truckload shipments. Contrary to popular belief in some quarters, data compiled from the U.S. Census of Transportation indicate that private truck operations are not increasing at a greater rate than are for-hire trucking operations.

Common carriers offer their services to any shipper to transport his goods between designated points at published rates under authority granted them by the ICC. Known as a certificate of public convenience and necessity, this authority spells out both the types of commodities which may be carried and the service routes, whether irregular route service between areas on a non-scheduled basis or regular route service over designated roads on a scheduled basis. The ICC must also approve the tariffs established for various classes of freight by the ten regional rate bureaus. In general, any service which is not specified by the terms of an operating certificate is forbidden.

Contract carriers, as the name applies, are restricted to serving a shipper or a limited number of shippers under specific contractual arrangements and may not, unlike the common carriers, offer their services to the public-at-large. Owing to the non-public nature of these carriers, the rates which they may charge differ from the tariff structure governing common carriers. Operating authorities which specify areas to be served and commodities to be carried must be obtained from the ICC.

Certain types of interstate for-hire motor carrier operations are exempted from economic regulation based on the commodities involved or upon the area served. Such operations are, of course, still subject to other types of regulation with regards to safety and taxation; and hours of service where applicable.

Exempt commodities—primarily agricultural products, livestock and forest products—may be transported by any type of motor carrier without economic regulation. Processed foods, meats and lumber, however, are not exempt. As examples, a great portion of America's fresh fruits and vegetables are transported to market by exempt commodity carriers—often known in parts as "owner-operators."

The ICC has determined that for-hire motor carriers which operate within defined "exempt commercial zones" are also not subject to economic regulation. Such operations, often known as local cartage, are carried out by a myriad of firms domiciled in towns and cities across the country. The ICC has recently implemented a plan which greatly increased the exempt commercial zones of all U.S. towns and cities. The trucking industry is of the opinion that this expansion was carried out in an arbitrary manner and is resulting in a form of creeping deregulation of motor carriers.

"Owner-operators," "independent truckers," the terms are used somewhat interchangeably although there is a distinction between the two.

An independent trucker is one who does not hold a certificate or permit—operating rights—from the ICC. He may own one truck which he drives himself, in which case he is an owner-operator or he may own several trucks and employ drivers to operate them. He may also drive one himself, and in this way he may be an independent trucker or a lease operator.

In either case, he may haul "exempt" commodities or he may lease his truck(s) with drivers to regulated carriers. Except when returning toward their bases from an exempt haul, leases

must cover a minimum of 30 days.

If he hauls exempt commodities primarily, whether he owns one truck which he drives, or more for which he hires drivers, he is an independent trucker.

While his vehicle(s) is (are) leased to a regulated carrier on a long term basis, he is subject to the lessors complete direction. Under these circumstances, he is not an independent trucker.

Available evidence indicates that there are about 100,000 vehicles owned by "independent truckers-owner operators." Of these, about 60 percent are leased to regulated carriers and 40 percent are exempt haulers or independent truckers.

Publicly Held Group

The regulated motor carrier industry is composed overwhelmingly of numerous small firms with three quarters grossing less than $500,000 a year. At the other end of the spectrum are the large well established carriers and included in this group are some of the industry's publicly held firms.

One of the reasons motor carriers may decide to sell their stock to the public is to provide new capital for future growth, or, on the other hand, the capital may reduce some debts created by past growth, thus resulting in an improved balance sheet position. Many other factors, too detailed and numerous to mention, are considered by management before a decision is made on whether or not to seek public financing.

There were forty-five publicly traded motor carriers in 1978 for which consistent data are available. The term "motor carrier" includes those companies who derive 50 percent or more of their consolidated revenues from trucking operations. A few of these forty-five companies have significant non-trucking operations and thus, caution should be exercised in comparing consolidated revenues for this group with total regulated motor carrier industry revenues. Further, there are several sizable motor carriers which are subsidiaries of publicly held non-transportation firms excluded from the group of forty-five.

Of the forty-five motor carrier stocks, eleven were listed on the New York Stock Exchange, nine on the American Stock Exchange and twenty-five were traded in the over-the-counter market. Some of the stocks are actively traded with the number of shares outstanding great enough to be of interest to large institutional investors while other stocks are traded on a regional basis and have more limited marketability.

Revenues for the publicly held motor carriers have grown, although the 1975 recession interrupted the upward trend. Motor carrier stocks have not fared as well. John Pincavage, Jr., in the *1978 Financial Analysis of Motor Carrier Industry* investor section asks the question, "If motor carrier earnings were up in 1977, why did stock prices not rise accordingly?" Clearly, investor concern for the uncertainties currently associated with the industry along with worries about the economy in general are factors in the underperformance of the stocks. But, as Mr. Pincavage concludes, "we recognize that the motor carrier industry will remain a vital and essential part of the economy."

Consolidated Revenues of Publicly Held Carriers
(THOUSANDS OF DOLLARS)

1978	$9,885,950
1977	8,252,393
1976	6,788,329
1975	5,630,648
1974	5,998,944

Capital Conservation

Many motor carriers, both for-hire and private, prefer to lease their equipment rather than to purchase it. In some situations, leasing offers such advantages as conservation of capital and improved corporate cash flow. However, leasing, as opposed to short-term rentals, involves commitments to pay for the use of vehicles over a fixed period. In times of reduced business volume, a carrier utilizing leased equipment might find his costs continuing relatively unabated.

Equipment leasing may take several forms, and all are utilized by for-hire motor carriers. Trailers are normally leased from firms specializing in this field, but they may also be leased from an equipment subsidiary of the carrier. The leasing of straight trucks, for pick-up and delivery service, follows a similar pattern—and the lease is usually without driver.

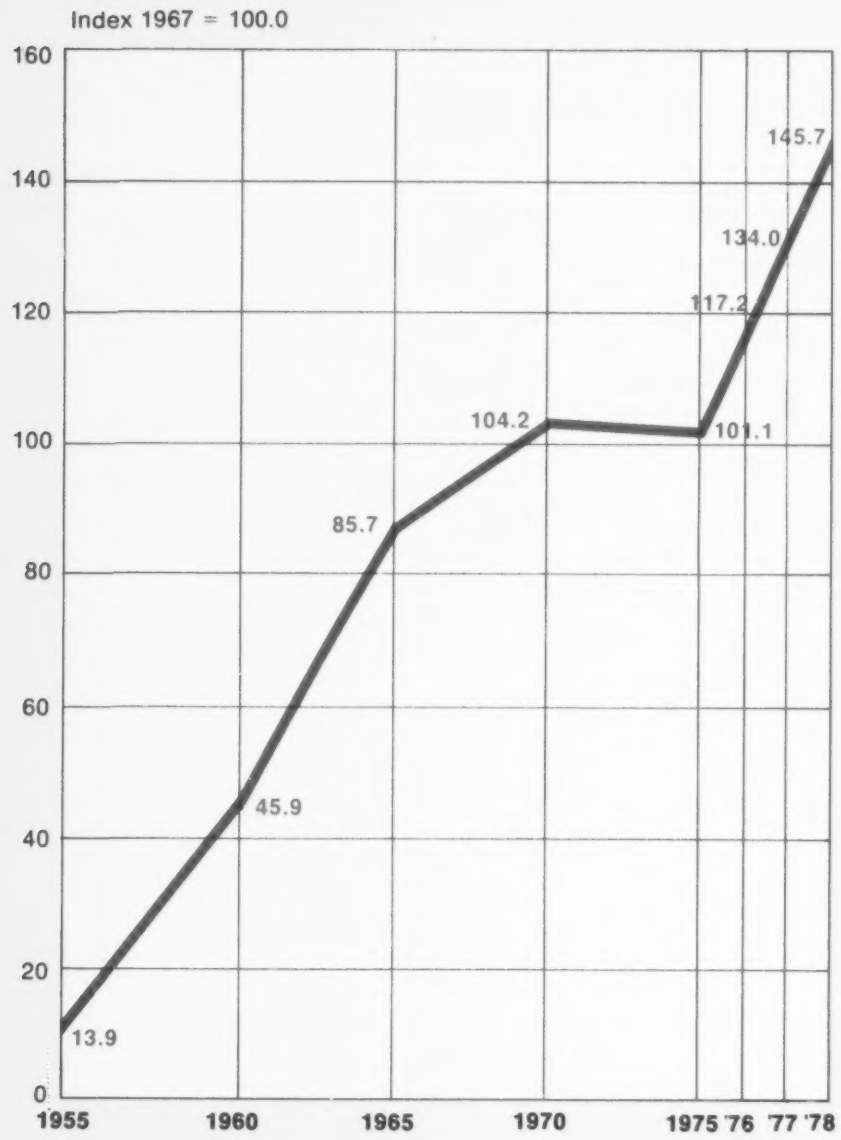
The options available for leasing tractors are somewhat broader for the for-hire carrier. Tractors may be leased without driver from either an independent leasing company or from an equipment subsidiary of the carrier itself. In addition, a for-hire carrier may lease a tractor with driver through the utilization of owner-operators. Today, the majority of the Nation's owner-operators drive under a long-term lease arrangement for regulated motor carriers. Trip leasing of owner-operator equipment is also utilized to balance operations by some motor carriers. The law prohibits private carriers from engaging owner-operators under either a long-term or trip lease arrangement.

Due to the diversity of leasing arrangements available to the trucking industry, it has not been feasible to obtain detailed statistics in this field.

Piggyback Carloading

From a nominal beginning in the early 1950s, piggyback—trailer-on-flatcar and container-on flat car (TOFC/COFC)—has now become a mature transport submode whose volume moves similarly to rail and truck tonnage indices. In 1978, the 1.76 million piggyback cars loaded represented in excess of 3 million trailers and containers.

In addition to the relatively small number of containers moving in piggyback as COFC, **intermodal containers,** of which 1,133,101 were available for use in the U.S. in 1978, are carried in the land mode primarily by trucks to and from water ports. The number of intermodal containers of all sizes has doubled since 1975, and are now owned almost exclusively by leasing firms and ship lines.

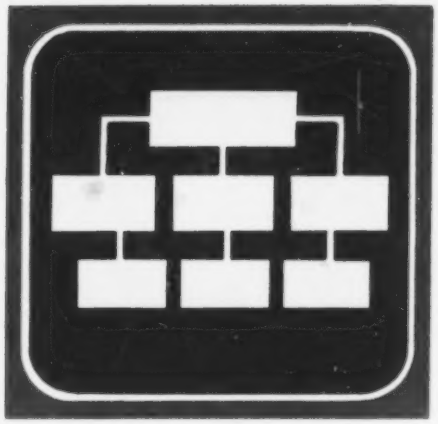


Piggyback Carloading[1]

	CARS LOADED	INDEX
1955	168,150	13.9
1960	554,115	45.9
1965	1,034,377	85.7
1967	1,207,242	100.0
1968	1,337,149	110.8
1969	1,344,123	111.3
1970	1,257,993	104.2
1971	1,199,137	99.3
1972	1,330,932	110.2
1973	1,535,374	127.2
1974	1,511,717	125.2
1975	1,220,637	101.1
1976	1,415,132	117.2
1977	1,617,315	134.0
1978	1,758,358	145.7

[1]Cars loaded with trailers and containers, excluding mail and express.

SOURCE: *Weekly Carloading Report,* Car Services Division, Association of American Railroads.



Interstate Commerce Commission

The following terminology is commonly used to describe ICC regulated motor carriers of property:

A. **On a revenue basis—**

CLASS I carriers are those receiving annual gross operating revenues (including interstate and intrastate) of $3 million or more from property motor carrier operations.

CLASS II carriers are those receiving annual gross operating revenues (including interstate and intrastate) of $500,000 to $2,999,999 from property motor carrier operations.

CLASS III carriers are those receiving annual gross operating revenues (including interstate and intrastate) of less than $500,000 from property motor carrier operations.

These revenue classification levels have changed a number of times during the years, the current ones having been adopted January 1, 1974.

B. **On a type of service basis—**

COMMON carriers are for-hire carriers whose services must be made available to the general public on a nondiscriminatory basis within the limitations imposed by their ICC granted authorities, commonly called certificates of convenience and necessity.

CONTRACT carriers are for-hire carriers which offer specialized services to a limited number of shippers on a continuing contract basis. They operate under ICC granted permits.

Many carriers hold both common and contract operating authorities and disclose the intercity revenues, mileage and tonnage for each separately. In these cases intercity carriers are classified as either common or contract on the basis of the greater amount of revenues.

C. **On the basis of the territory served—**

LOCAL carriers are those which operate principally within a single or contiguous commercial zone, yet have some aspect of their operations subject to ICC authority (i.e., handle interstate interline freight on a pickup or delivery basis for other carriers, have some interstate authority of their own, haul certain specified commodities, etc.). Carriers with intercity authorities of their own should report those revenues, miles and tons even though the greatest percentage of their revenues will be from local cartage.

INTERCITY carriers are those operating interstate and intrastate with the majority of their revenues derived from non-local cartage. These carriers are further subclassified as either regular route—operating predominately over designated highways, or irregular route—authority to serve an area over any appropriate route.

D. **On a financial report disclosure basis—**

INSTRUCTION 27 refers to Class I and II common carriers which derive an average of 75 percent or more of their revenues during the latest three calendar years from the intercity transportation of general commodities. These carriers, commonly used to assess the level of operating costs in the industry, must report details on their intercity vehicle mileage, tons and ton-miles as well as truckload and less-truckload revenues, tonnage and number of shipments in both quarterly and annual reports to the ICC. The actual weight of 10,000 pounds distinguishes less-truckload from truckload shipments, and hence tonnage and revenues.

INSTRUCTION 28A refers to Class I and II carriers of general commodities not covered by Instruction 27 and all Class I and II carriers of special commodities except household goods. These carriers report only minimum detail of intercity mileage and tonnage on a quarterly basis, but the same detail as Instruction 27 carriers on an annual basis except for the truckload/less-truckload data. In general these carriers, especially those hauling specified commodities, handle shipments with a weight far in excess of 10,000 pounds.

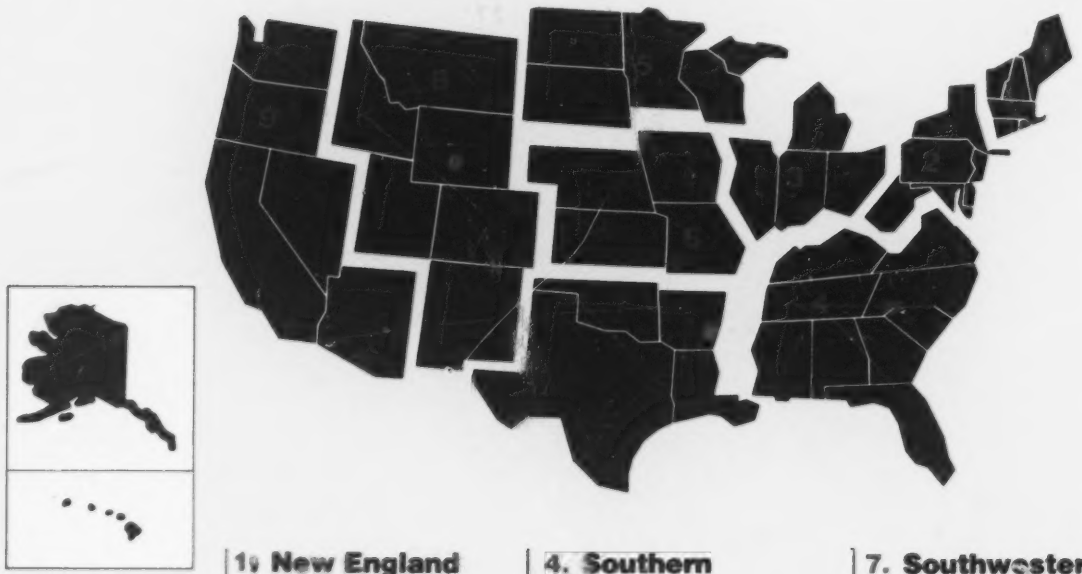
INSTRUCTION 28B refers to Class I and II motor carriers which derive a predominant portion of their total operating revenues from the interstate and intrastate transportation of household goods. These carriers have their own specific Uniform System of Accounts needed to report revenues and expenses not common to the rest of the industry (packing, warehousing, overseas movements, etc.).

E. **On the basis of commodity handled—**

Carriers are further classified on the basis of greatest percentage of revenues received for hauling the following commodities:

01—General Freight
02—Household Goods
03—Heavy Machinery
04—Petroleum Products
05—Refrigerated Liquids
06—Refrigerated Solids
07—Dump Trucking
08—Agricultural Commodities
09—Motor Vehicles
10—Armored Truck Service
11—Building Materials
12—Films & Associated Commodities
13—Forest Products
14—Mine Ores not including Coal
15—Retail Store Delivery Service
16—Dangerous or Hazardous Materials
17—Other Commodities not elsewhere classified

ICC Geographic Regions



1. New England
2. Middle Atlantic
3. Central
4. Southern
5. Northwestern
6. Middlewestern
7. Southwestern
8. Rocky Mountain
9. Pacific

MODAL DISTRIBUTION

Brief Facts

- Although the railroads average length of haul exceeds that of motor carriers, a ten year comparison shows that the average length of haul of Class I common and contract carriers has been increasing much more rapidly than rail haul lengths.
- For all manufactured freight, trucks dominate the movements of shipments under 10,000 pounds.
- Trucks increased their market share of coal shipments from 12.4% in 1972 to 15.2% in 1976.
- The regulated motor carrier industry hauled an estimated 980 million tons of freight in 1978.

Other Sources of Modal Distribution

Transportation Facts And Trends
Transportation Association of America
Suite 1107
1100 17th Street, N.W.
Washington, D.C. 20036

National Transportation Statistics
Transportation Systems Center
Transportation Information Division
Statistical Information Reporting Branch
Kendall Square, Cambridge, MA 02142

Ton-Miles Among Regulated Freight Carriers[1]

INDEX 1967 = 100

	Railroads[2] Class I & II		Motor Trucks Class I, II & III		Water Carriers[3]		Pipelines (Oil)		Airways[4]	
	MILLIONS OF TON-MILES	INDEX	MILLIONS OF TON-MILES	INDEX	MILLIONS OF TON-MILES	INDEX	MILLIONS OF TON-MILES	INDEX	MILLIONS OF TON-MILES	INDEX
1950	596,940	81.6	65,648	43.3	N/A	N/A	99,977	27.7	201.7	9.7
1955	623,615	85.3	82,906	54.7	N/A	N/A	151,834	42.1	328.1	15.9
1960	579,130	79.2	104,355	68.9	N/A	N/A	185,264	51.3	664.7	32.1
1965	697,878	95.4	140,311	92.6	44,400	121.6	248,727	68.9	1,572.5	76.0
1967	731,216	100.0	151,515	100.0	36,500	100.0	361,041	100.0	2,068.9	100.0
1970	764,809	104.6	170,000	112.2	41,100	112.6	366,800	101.6	2,474.7	119.6
1972	776,746	106.2	205,000	135.3	46,500	127.4	402,200	111.4	2,886.0	139.5
1973	851,809	116.5	221,000	145.9	51,100	140.0	428,400	118.7	3,167.3	153.1
1974	850,961	116.4	218,000	143.9	50,900	139.5	410,000	113.6	3,140.3	151.8
1975	759,000	103.8	200,000	132.0	41,200	112.9	428,200	118.6	3,020.2	146.0
1976	799,900	109.4	225,000	148.5	44,300	121.4	434,500	120.3	3,160.9	152.8
1977	826,292	113.0	245,000	161.7	41,400	113.4	N/A	N/A	3,389.4	163.8
1978	858,105	117.4	265,000	174.9	N/A	N/A	N/A	N/A	3,768.9	182.2

[1]Included are ton-miles of federally regulated carriers only, a major portion of the traffic handled by motor and water is not subject to this regulation—for example, not reflected are the ton-miles generated by intrastate, local and exempt for-hire and private motor carriers.

[2]Includes express and mail until 1970.

[3]Domestic service only, including Hawaii and Alaska.

[4]Domestic service, certificated and charter, including Hawaii and Alaska after 1960. In November 1977, the domestic air freight industry was deregulated.

e—Estimated

SOURCE: Interstate Commerce Commission, Civil Aeronautics Board, Association of American Railroads, American Trucking Associations, Inc. and Waterborne Commerce of the U.S., Department of Army Corp. of Engineers.

Small Shipment Traffic

Small shipments, normally defined as shipments weighing less than 10,000 lbs., are handled predominantly (90.3% of the tonnage) by the highway motor carriers. Often referred to as less-than-truckload (LTL) or less-than-carload (LCL) by the trucking and rail industries respectively, typical small shipments consist of consumer-type goods. Within the general classification of small shipments are those small parcels weighing 50 lbs. or less which are carried primarily by UPS, the Postal Service or as air freight. Formerly, a considerable volume of small shipments was handled by the Railway Express Agency (REA) which ceased its operations in 1974. Changes in the Nation's system of physical distribution management, with the increasing reliance on regional or area warehouses, has reduced the demand for small shipment services in relation to the total freight volume.

The ton-mile is a commonly used measurement of transportation output and is defined as the movement of one ton one mile. Ton-miles are derived by multiplying either the average tons by the total miles or the average length of haul by the total tons. They are useful in economic analysis when comparing similar units but are inappropriate when items of different value in relation to weight are concerned.

Small Shipment Traffic Tonnage of Regulated Intercity Carriers

Index 1967 = 100	Highway	Parcel Post[2]		Rail Class I & II	Water Carriers	Air Freight		Class A Freight Forwarder	Total	
		Surface	Air			Airline	Forwarder			
1965	95.3	107.5	79.7	140.5	103.5	78.7	67.0	91.8	**96.0**	
1966	101.8	100.8	88.5	109.1	82.0	91.5	86.1	103.4	**101.7**	
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	**100.0**	
1968	103.8	85.4	134.9	85.8	87.6	120.1	134.6	103.5	**103.1**	
1969	106.5	78.5	160.4	84.6	85.0	133.2	159.5	102.1	**105.4**	
1970	99.1	67.1	157.3	77.8	58.1	158.5	195.5	96.6	**98.4**	
1971	100.4	62.2	150.0	72.8	44.2	164.2	200.0	83.7	**98.7**	
1972	106.0	54.9	158.3	64.1	47.5	189.1	226.2	97.8	**104.2**	
1973	108.0	55.9	161.5	49.3	50.7	215.8	254.0	103.1	**106.5**	
1974	111.1	51.3	162.5	43.7	63.4	210.1	258.3	121.7	**109.8**	
1975	110.9	30.9[3]	114.6[3]	31.7	53.7	198.4	243.4	109.1	**107.7**	
1976p	110.5	23.6	113.0	36.4	90.0	209.7	275.4	101.1	**107.1**	
PERCENT DISTRIBUTION										TOTAL SMALL SHIPMENTS
1967	87.6	4.0	0.2	1.6	0.3	1.3	0.3	4.7	100%	93,185
1976	90.3	0.9	0.2	0.5	0.3	2.5	0.9	4.4	100%	99,823

p—Preliminary 1Combination of Motor Carriers Class I and II, Bus Express and United Parcel Service.
2Combination of Railway Express Agency (REA) and Parcel Post. 3REA went out of business in 1974.

highway small shipment traffic tonnage

Index 1967 = 100	Motor Class I & II	Bus Express	United Parcel Post		
1965	95.9	95.7	53.5		
1966	102.3	97.9	67.2		
1967	100.0	100.0	100.0		
1968	103.8	102.1	108.5		
1969	105.4	103.8	183.2		
1970	97.4	106.0	213.7		
1971	97.9	108.5	272.3		
1972	103.3	110.7	290.0		
1973	104.5	112.8	348.0		
1974	107.4	115.4	367.2		
1975	106.0	117.9	441.2		
1976p	106.0	120.1	415.5		
PERCENT DISTRIBUTION					TOTAL SMALL SHIPMENTS
1967	98.3	0.3	1.4	100%	81,595
1976	94.3	0.3	5.4	100%	90,146

SOURCE: ***Transport Economics*** **Issue Vol. V No. 1-1978, Bureau of Economics, Interstate Commerce Commission.**

p—Preliminary

Coal Shipments/Tonnage

In terms of tonnage hauled by the various transportation modes, the trucking portion—regulated and non-regulated—continues to grow. While the rails carry more freight than the other modes, that amount is little changed from the 1955 total. Air, on the other hand, has shown dramatic gains although their overall market share is slight, amounting to less than one percent.

Gains in the marketing industry are reflected even in such rail dominated commodities as coal. In 1976, trucks handled 15.2% of coal shipments from the mine, up 2.8% from their 1972 share of 12.4%

Shipments of Coal from the Mine, by Mode of Transportation

As Percent of Total Coal Transported[1]

YEAR	RAIL	WATER	TRUCK
1972	74.4	13.2	12.4
1973	75.9	13.1	11.0
1974	74.7	12.7	12.5
1975	73.8	12.2	14.0
1976	73.0	11.8	15.2

[1]Coal used at mine-mouth generating plants and at the mines was excluded from the total.
Source: *Coal Traffic Annual*, National Coal Association.

Domestic Intercity Tonnage Carried By Mode

(Millions of Tons)

	Truck ICC—Regulated (ATA Est.)	Truck ICC—Regulated (TAA Est.)	Truck Non-ICC Regulated	Rail Class I & II	Oil Pipelines	Water Carriers	Air	Total
1950		213	581	1,421	284	544	.2	**3,043**
1955		314	749	1,459	413	631	.5	**3,567**
1960		387	794	1,301	468	655	.6	**3,606**
1965		557	1,084	1,479	588	726	1.4	**4,435**
1970		661	1,167	1,572	790	867	2.9	**5,060**
1971		707	1,155	1,472	807	863	2.9	**5,007**
1972		771	1,163	1,531	876	895	3.3	**5,239**
1973		830	1,198	1,616	912	897	3.5	**5,457**
1974		800	1,155	1,619	885	890	3.5	**5,353**
1975	750	714	1,030	1,471	879	865	3.2	**4,962**
1976	845	808	1,166	1,477	934	892	3.4	**5,280**
1977	925	877	1,266	1,463	1,005	N/A	3.6	**N/A**
1978p	980	N/A	N/A	N/A	N/A	N/A	N/A	**N/A**

[1]Prior to 1975, ATA did not make tonnage estimates.
[2]Total excludes ATA estimates.

N/A = Not Available
p Preliminary

SOURCE: ATA estimates; *Transportation Facts and Trends*, Transportation Association of America.

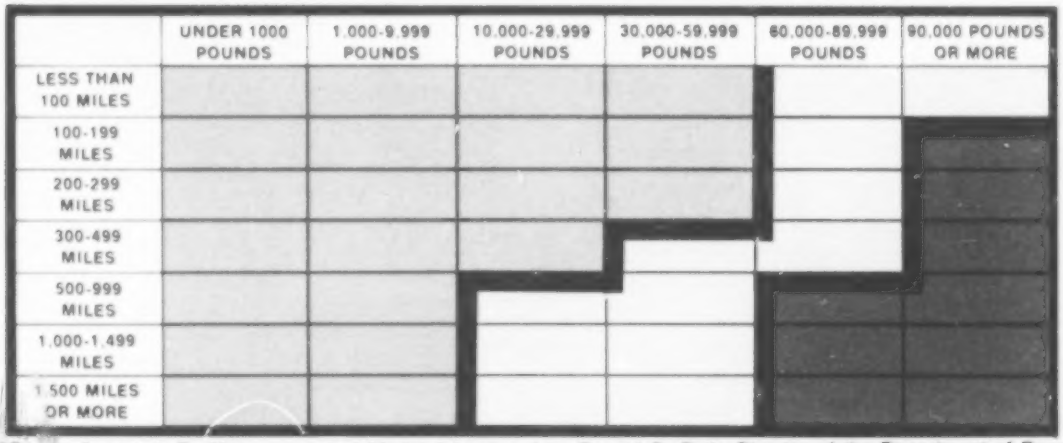
Shipment Size/Length of Haul

In general it is the size of the shipment and its distance of movement which provides the key to modal use. For all manufactured freight, trucks dominate the movement of shipments under 10,000 pounds and the shorter-distance movement of larger lot shipments. Trucks and rails compete for much of the other freight up to the very heavy shipments, where rails handle the predominate portion of the freight. The chart by weight and distance of shipment visually indicates general modal use.

The Interstate Commerce Commission has compiled comparative data on the **average length of freight hauls** per ton for Class I rails, motor carriers and petroleum pipelines. Over the ten years 1965-1975, average haul lengths in the U.S. have risen in all instances, except for pipelines carrying crude oil. Surprisingly, crude oil pipelines had an average haul length of only 288 miles (483 kilometers) in 1975 —substantially below the figure shown for motor common carriers (330 miles or 531 kilometers).

The longest average haul length is shown for the railroads—516 miles (830 kilometers) for the U.S. as a system. However, the increase in all rail haul lengths has been substantially less than that posted for Class I common and contract motor carriers. A conclusion which may be drawn here is that while the railroads are in a relatively static state of development, motor freight operations are still developing and expanding.

Distribution of Shipment Size and Distance Modally Dominated and Intermodally Competitive for All Products 1972



SOURCE: "An Approach To Measurement of Modal Advantage" by Ronald D. Roth, Director of the Department of Research, ATA, 1977. Based on data from U.S. Department of Commerce, Bureau of the Census, *1972 Census of Transportation, Commodity Transportation Survey*.

■ TRUCK DOMINANT ■ COMPETITIVE ■ RAIL DOMINANT

This chart was constructed by analyzing the classification of each specific cell for each of the eighty-nine products. Each cell of the above chart that is encompassed within the TRUCK area exhibited truck-domination in that cell in a majority of the eighty-nine products. RAIL-DOMINATED and COMPETITIVE cells were classified by the same procedure.

Average Freight Length of Haul Per Ton

	1965 (MILES)	1975 (MILES)	Ten-Year Change
Line Haul Railroads			
U.S. As a System	477	516	+ 8%
Per Carrier	257	302	+ 18%
Class I Motor Carriers			
Common Carriers	259	330	+ 27%
Contract Carriers	144	240	+ 67%
Class I Pipelines (petroleum)			
Crude Oil	320	288	- 10%
Petroleum Products	334	366	+ 10%

[1]Excludes household goods carriers.

SOURCE: ***Transport Economics*, Issue Vol. IV, No. 4-1977, Bureau of Economics, Interstate Commerce Commission.**

APPENDIX

APPENDIX

Net Working Capital is Current Assets minus Current Liabilities. The Current Portion of Long-Term Debt (that due within one year) is included in Current Liabilities.

Transportation Investment is Carrier Operating Property (Net of Accumulated Depreciation) plus Net Working Capital.

Capital is Stockholder's Equity plus Total Long-Term Debt Due After One Year.

Net Debt is Total Long-Term Debt Due After One Year minus Net Working Capital.

Cash Flow is final Net Income plus Depreciation plus Deferred Taxes accrued during the reporting period minus Equity in the Earnings (losses) of Affiliated Companies.

The derivations contained in this publication are computed as:

I. BALANCE SHEET AND INCOME STATEMENT

A. **Operating Ratio** is Total Operating Expenses divided by Gross Freight Revenues.

B. **Net Profit Margin** is Net Income (Before Taxes, Extraordinary Items, Prior Period Adjustments, Income from Equity in Affiliates and the Gain or Loss on Disposal of Discontinued Segments) divided by Gross Freight Revenues.

C. **Return on Transportation Investment** is Net Income (After Taxes but Before Extraordinary Items, Prior Period Adjustments, Income from Equity in Affiliates and the Gain or Loss on Disposal of Discontinued Segments) divided by Transportation Investment.

D. **Return on Equity** is Net Income (as defined in (C) above) divided by Equity.

E. **Return on Capital** is Net Income (as defined in (C) above) divided by Capital.

F. **Current Ratio** is Current Assets divided by Current Liabilities.

G. **Turnover of Net Carrier Operating Property** is Gross Freight Revenues divided by Carrier Operating Property (Net of Accumulated Depreciation).

H. **Long Term Debt to Equity** is Total Long-Term Debt divided by Equity.

I. **Net Debt to Equity** is self-explanatory.

J. **Cash Flow to Current Liabilities** is self-explanatory.

K. **Average Days Expenses in Working Capital** is Net Working Capital divided by [(Total Operating Expenses excluding both Depreciation and Amortization and Gain (Loss) on Disposition of Operating Assets) divided by 365].

L. **Accounts Receivable Turnover** is Gross Freight Revenues divided by Notes and Accounts Receivable (Net of Allowance for Uncollectible Accounts). Receivables from Affiliates are not included in Notes and Accounts Receivable.

M. **Number of Times Interest Earned** is Net Income (as defined in (B) above) net of Interest Expense divided by Interest Expense.

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